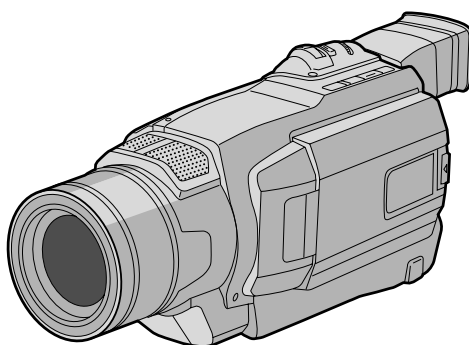


JVC

SERVICE MANUAL

DIGITAL VIDEO CAMERA

GR-DVL120A



Mini DV PAL

Regarding service information other than these sections, refer to the GR-DVL145EG-X service manual (No. 86693). Also, be sure to note important safety precautions provided in the service manual.

SPECIFICATIONS *(The specifications shown pertain specifically to the model GR-DVL120)*

Camcorder		Connectors	
General		S-Video Output	: Y: 1 V (p-p), 75 Ω , analogue C: 0.29 V (p-p), 75 Ω , analogue
Power supply	: DC 11.0 V --- (Using AC Adapter) DC 7.2 V --- (Using battery pack)	AV Video output Audio output	: 1 V (p-p), 75 Ω , analogue : 300 mV (rms), 1 k Ω , analogue, stereo
Power consumption LCD monitor off, viewfinder on	: Approx. 4.3 W	DV Output Input	: 4-pin, IEEE 1394 compliant : 4-pin, IEEE 1394 compliant
LCD monitor on, viewfinder off	: Approx. 5.3 W	AC Adapter	
Dimensions (W x H x D)	: 83 mm x 94 mm x 223 mm (with the LCD monitor closed and the viewfinder pushed down)	Power requirement	: AC 110 V to 240 V $\sim$, 50 Hz/60 Hz
Weight	: Approx. 630 g	Output	: DC 11 V --- , 1 A
Operating temperature	: 0°C to 40°C	Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.	
Operating humidity	: 35% to 80%		
Storage temperature	: -20°C to 50°C		
Pickup	: 1/4" CCD		
Lens	: F 1.6, f = 3.9 mm to 62.4 mm, 16:1 power zoom lens		
Filter diameter	: ϕ 40.5 mm		
LCD monitor	: 2.5" diagonally measured, LCD panel/TFT active matrix system		
Viewfinder	: Electronic viewfinder with 0.24" black/white LCD		
Speaker	: Monaural		
Digital Video Camera			
Format	: DV format (SD mode)		
Signal format	: PAL standard		
Recording/Playback format	: Video: Digital component recording : Audio: PCM digital recording, 32 kHz 4-channel (12-bit), 48 kHz 2-channel (16-bit)		
Cassette	: Mini DV cassette		
Tape speed	: SP: 18.8 mm/s LP: 12.5 mm/s		
Maximum recording time (using 80 min. cassette)	: SP: 80 min. LP: 120 min.		

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The following table indicate main different points between models GR-DVL145EG-X and GR-DVL120A.

ITEM	MODEL	GR-DVL145EG-X	GR-DVL120A
DV TERMINAL		OUTPUT ONLY	IN/OUT

The following table indicate different parts number between models GR-DVL145EG-X and GR-DVL120A.

PACKING AND ACCESSORY ASSEMBLY <M1> Note: As for IB (INSTRUCTIONS), refer to sec.5.

REF. NO.	ITEM	MODEL	GR-DVL145EG-X	GR-DVL120A
9	WARRANTY CARD		BT-54013-2	—
13	SHEET(CON PLUG)		—	LYT0609-001A
29	CONVERSION PLUG		—	PEMC1012-02
35	ADAPTER PLUG		QAM0302-001	—

FINAL ASSEMBLY <M2>

REF. NO.	ITEM	MODEL	GR-DVL145EG-X	GR-DVL120A
101	UPPER CASE ASSY		LY20867-002A	*LY20867-002B
116	STICKER(MONI.)		LY43808-002A	LY43808-003A

MONITOR ASSEMBLY <M5>

REF. NO.	ITEM	MODEL	GR-DVL145EG-X	GR-DVL120A
519	DIFFUSION SHEET(2.5)		LY43362-001A	*LY43901-001A

MAIN BOARD ASSEMBLY <01>

REF. NO.	ITEM	MODEL	GR-DVL145EG-X	GR-DVL120A
PW	MAIN BOARD ASSY		YB10368B-01	YB10368C
IC1401	IC(MICRO C ROM)		UPD703040YF-M12	UPD703040YF-M10

Notes : Mark — is not used.
Mark * reference model was also changed.



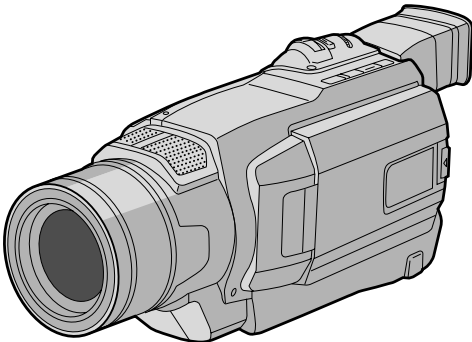
JVC

SERVICE MANUAL

DIGITAL VIDEO CAMERA

GR-DVL145EG

GR-DVL145EG



Mini **DV** PAL

SPECIFICATIONS *(The specifications shown pertain specifically to the model GR-DVL145EG/EK)*

Camcorder	
General	
Power supply	: DC 11.0 V  (Using AC Adapter) DC 7.2 V  (Using battery pack)
Power consumption	
LCD monitor off, viewfinder on	: Approx. 4.3 W
LCD monitor on, viewfinder off	: Approx. 5.3 W
Dimensions (W x H x D)	: 83 mm x 94 mm x 223 mm (with the LCD monitor closed and the viewfinder pushed down)
Weight	: Approx. 630 g
Operating temperature	: 0°C to 40°C
Operating humidity	: 35% to 80%
Storage temperature	: -20°C to 50°C
Pickup	: 1/4" CCD
Lens	: F 1.6, f = 3.9 mm to 62.4 mm, 16:1 power zoom lens
Filter diameter	: ø40.5 mm
LCD monitor	: 2.5" diagonally measured, LCD panel/TFT active matrix system
Viewfinder	: Electronic viewfinder with 0.24" black/white LCD
Speaker	: Monaural
Digital Video Camera	
Format	: DV format (SD mode)
Signal format	: PAL standard
Recording/Playback format	: Video: Digital component recording : Audio: PCM digital recording, 32 kHz 4-channel (12-bit), 48 kHz 2-channel (16-bit)
Cassette	: Mini DV cassette
Tape speed	: SP: 18.8 mm/s LP: 12.5 mm/s
Maximum recording time (using 80 min. cassette)	: SP: 80 min. LP: 120 min.

Connectors	
S-Video Output	: Y: 1 V (p-p), 75 Ω, analogue C: 0.29 V (p-p), 75 Ω, analogue
AV	
Video output	: 1 V (p-p), 75 Ω, analogue
Audio output	: 300 mV (rms), 1 kΩ, analogue, stereo
DV	
Output	: 4-pin, IEEE 1394 compliant
AC Adapter	
Power requirement	: AC 110 V to 240 V~, 50 Hz/60 Hz
Output	: DC 11 V  , 1 A
Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.	

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Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

● Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the  symbol and shaded () parts are critical for safety.
Replace only with specified part numbers.

Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
Caution for continued protection against fire hazard.
Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
1) Wires covered with PVC tubing
2) Double insulated wires
3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
1) Insulation Tape 3) Spacers 5) Barrier
2) PVC tubing 4) Insulation sheets for transistors

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

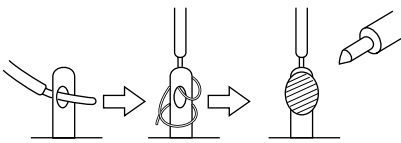


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

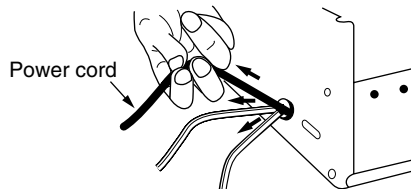


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector

In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

1) **Connector part number** : E03830-001

2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.

3) **Replacement procedure**

(1) Remove the old connector by cutting the wires at a point close to the connector.

Important : Do not reuse a connector (discard it).

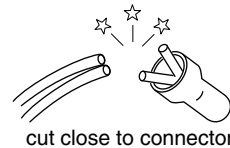


Fig.3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

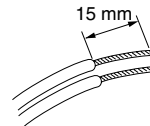


Fig.4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

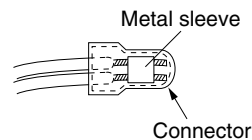


Fig.5

(4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

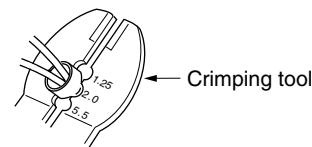


Fig.6

(5) Check the four points noted in Fig.7.

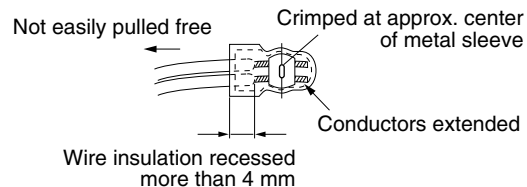


Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Insulation resistance test

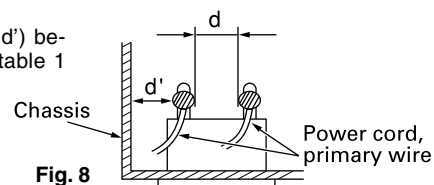
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

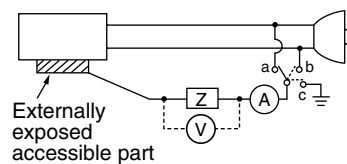


4. Leakage current test

Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method : (Power ON)

Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

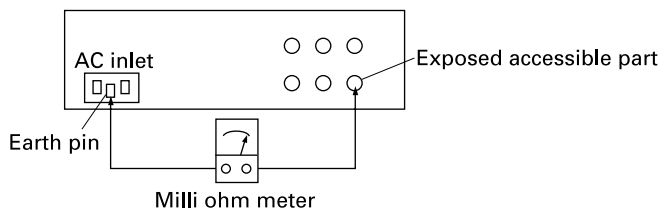


5. Grounding (Class 1 model only)

Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).

Measuring Method:

Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.



Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	$Z \leq 0.1 \text{ ohm}$
Europe & Australia	$Z \leq 0.5 \text{ ohm}$

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	$R \geq 1 \text{ M}\Omega/500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3 \text{ mm}$
100 to 240 V			AC 1.5 kV 1 minute	$d, d' \geq 4 \text{ mm}$
110 to 130 V	USA & Canada	$1 \text{ M}\Omega \leq R \leq 12 \text{ M}\Omega/500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3.2 \text{ mm}$
110 to 130 V 200 to 240 V	Europe & Australia	$R \geq 10 \text{ M}\Omega/500 \text{ V DC}$	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	$d \geq 4 \text{ mm}$ $d' \geq 8 \text{ mm (Power cord)}$ $d' \geq 6 \text{ mm (Primary wire)}$

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan		$i \leq 1 \text{ mA rms}$	Exposed accessible parts
110 to 130 V	USA & Canada		$i \leq 0.5 \text{ mA rms}$	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia		$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Antenna earth terminals
			$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

SECTION 1 DISASSEMBLY

1.1 BEFORE ASSEMBLY AND DISASSEMBLY

1.1.1 Precautions

1. Be sure to remove the power supply unit prior to mounting and soldering of parts.
2. When removing a component part that needs to disconnect the connector and to remove the screw for removing itself, first disconnect the connecting wire from the connector and then remove the screw beforehand.
3. When connecting and disconnecting the connectors, be careful not to damage the wire.
4. Carefully remove and handle the part to which some spacer or shield is attached for reinforcement or insulation.
5. When replacing chip parts (especially IC parts), desolder completely first (to prevent peeling of the pattern).
6. Tighten screws properly during the procedures.
Unless specified otherwise, tighten screws at a torque of 0.088N·m(0.9kgf·cm).

1.1.2 Assembly and disassembly

STEP No.	PART	Fig.No.	POINT	NOTE
①	COVER(ZOOM) ASSY	Fig.1-3-1	(S①a),(S①b),2(L①a),2(L①b)	-
②	UPPER CASE ASSY (Inc.E,V,F ASSY (B/W),SPEAKER/MONITOR)	Fig.1-3-2	4(S②a),3(S②b),(L②),(S②c),(S②d) CAP(DC JACK) ☆CN②	NOTE②

(1) (2) (3) (4) (5)

- (1) Indicate the disassembly steps. When assembling, perform in the reverse order of these steps. This number corresponds to the number in the disassembly diagram.
- (2) Indicates the name of disassembly/assembly parts.
- (3) Indicates the number in the disassembly diagram.
- (4) Indicates parts and points such as screws, washers, springs which must be removed during disassembly/assembly.

Symbol Name, Point
 S Screw
 L Lock, Pawl, Hook
 SD Soldering
 ☆(Others) Connector, Cover, Bracket, etc.

(Example)

- 2 (S①) : Remove the two screws (S①) for removing the part 1.
- CN ②a: Disconnect the connector ②a .
- SD① : Unsolder at the point SD①.

- (5) Precautions on disassembly/assembly.

1.1.3 Destination of connectors

Note: Three kinds of double-arrows in connection tables respectively show kinds of connector/wires.

↔ : Wire
 ⇔ : Flat wire
 ⇔ : Board to Board connector

[Example]

Note: Remove the parts marked in .

CONN. No.	CONNECTOR					Pin No.
CN②	MAIN	CN101	↔	MONITOR	CN761	40

1.1.4 Disconnection of connectors (Wires)

Connector

Pull both ends of the connector in the arrow direction, remove the lock and disconnect the flat wire.

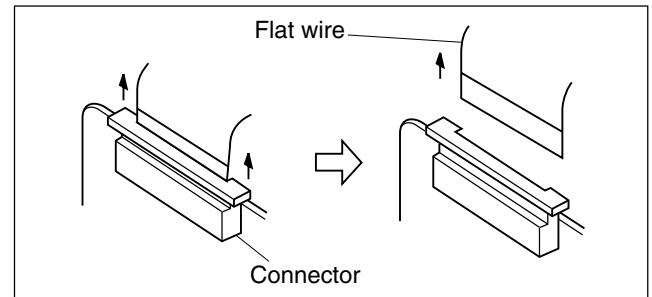


Fig. 1-1-1 Connector 1

Extend the locks in the direction of the arrow for unlocking and then pull out the wire. After removing the wire, immediately restore the locks to their original positions because the locks are apt to come off the connector.

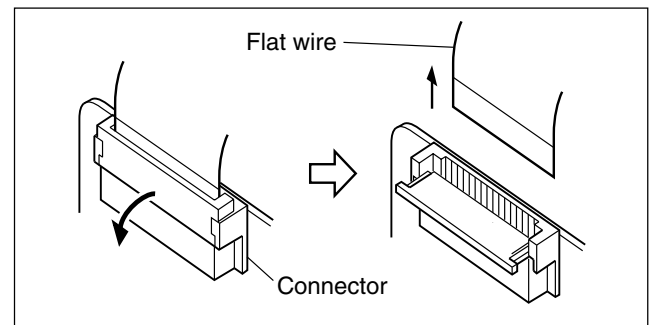


Fig. 1-1-2 Connector 2

B-B connector

Pull the board by both the sides in the direction of the arrow for disconnecting the B-B connector.

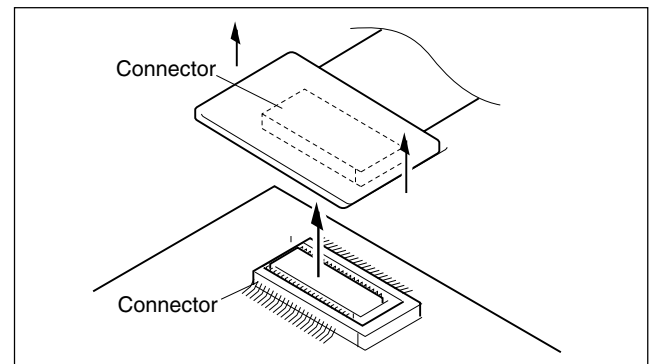


Fig. 1-1-3 Connector 3

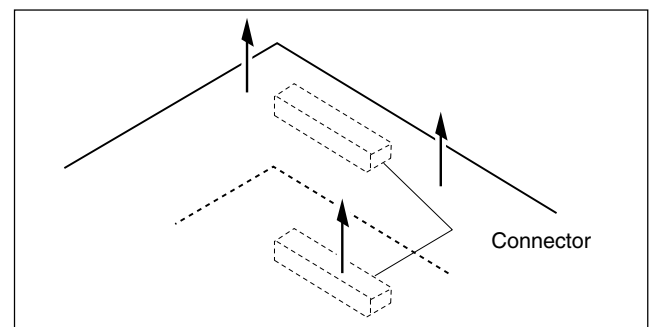


Fig. 1-1-4 Connector 4

1.2 JIGS AND TOOLS REQUIRED FOR DISASSEMBLY, ASSEMBLY AND ADJUSTMENT

1.2.1 Tools required for adjustments

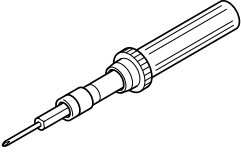
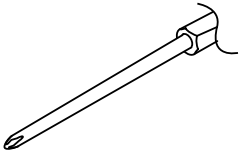
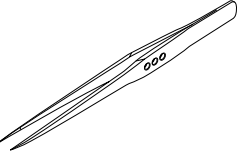
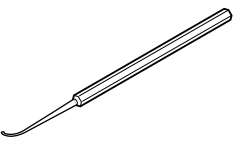
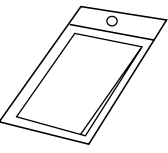
1	Torque driver YTU94088	2	Bit YTU94088-003
			
3	Tweezers P-895	4	Chip IC replacement jig PTS40844-2
			
5	Cleaning cloth KSMM-01		
			

Table 1-2-1

1. Torque driver

Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.

2. Bit

This bit is slightly longer than those set in conventional torque drivers.

3. Tweezers

To be used for removing and installing parts and wires.

4. Chip IC replacement jig

To be used for adjustment of the camera system.

5. Cleaning cloth

Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

1.3 DISASSEMBLY/ASSEMBLY OF CABINET PARTS AND BOARD ASSEMBLY

1.3.1 Disassembly flow chart

This flowchart indicates the disassembly step for the cabinet parts and board assembly in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order.

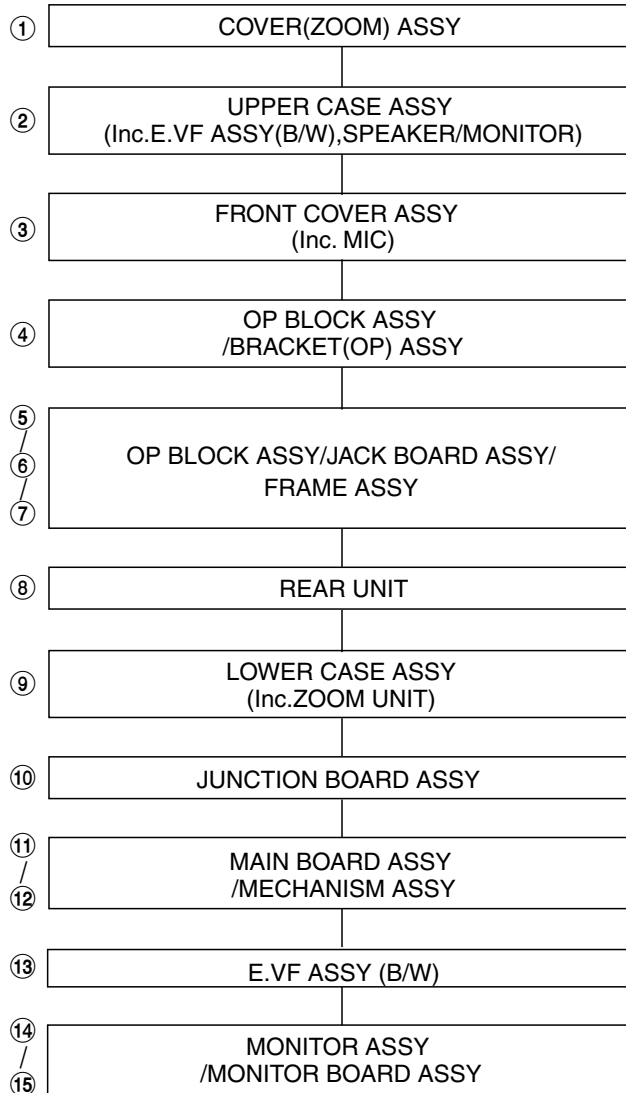


Table 1-3-1

1.3.2 Disassembly method

STEP No.	PART	Fig.No.	POINT	NOTE
①	COVER(ZOOM) ASSY	Fig.1-3-1	(S①a),(S①b),2(L①a),2(L①b)	-
②	UPPER CASE ASSY (Inc.E.VF ASSY (B/W),SPEAKER/MONITOR)	Fig.1-3-2	4(S②a),3(S②b),(L②),(S②c)(S②d) CAP(DC JACK) ☆CN②	NOTE②
③	FRONT COVER ASSY (Inc.MIC)	Fig.1-3-3	(S③a),2(S③b),(L③a)(L③b),☆CN③	NOTE③a NOTE③b
④	OP BLOCK ASSY /BRACKET(OP) ASSY	Fig.1-3-4	☆CN④a,CN④b,CN④c 3(S④)	-
⑤ / ⑥ / ⑦	OP BLOCK ASSY JACK BOARD ASSY FRAME ASSY	Fig.1-3-5	----- 3(S⑥) ----- 2(S⑦)	
⑧	REAR UNIT	Fig.1-3-6	☆CN⑧ 4(S⑧)	NOTE⑧
⑨	LOWER CASE ASSY (Inc.ZOOM UNIT)	Fig.1-3-7	☆CN⑨ (S⑨a),4(S⑨b),(L⑨a),(L⑨b)	-
⑩	JUNCTION BOARD ASSY	Fig.1-3-8	☆CN⑩a,CN⑩b,CN⑩c 2(S⑩),☆CN⑩d	NOTE⑩a NOTE⑩b
⑪ / ⑫	MAIN BOARD ASSY /MECHANISM ASSY	Fig.1-3-9	(S⑪a),(L⑪a),SHIELD PLATE ☆CN⑪a,CN⑪b,CN⑪c 2(S⑪b),(L⑪b)	-
⑬	E.VF ASSY (B/W)	Fig.1-3-10	☆CN⑬,(S⑬a),(S⑬b) (L⑬)	NOTE⑬a NOTE⑬b
⑭ / ⑮	MONITOR ASSY MONITOR BOARD ASSY	Fig.1-3-11	3(S⑭a),COVER(HINGE) ☆CN⑭, 2(S⑭b) ----- (S⑮a),PLATE(SPK), 3(S⑮b),(L⑮)	NOTE⑭ NOTE⑮

Table 1-3-2

- NOTE ②:** Remove the CAP (DC JACK) before removing these parts .
- NOTE ③a:** As it is difficult to remove (L③b), remove the F. COVER ASSY by lowering it.
- NOTE ③b:** Be careful not to damage any parts.
Particularly, take care not to scratch or stain the lenses.
- NOTE ⑧:** As screw No. 24 is hidden behind the cassette cover, open the cassette cover to enable removal of the screw.
- NOTE ⑩a:** As the CN572 is located at the back of the assembly, unplug the three connectors and remove the screws before disconnecting the CN572.
- NOTE ⑩b:** Be careful not to damage any of the switches.

Note: Remove the parts marked in .

CONN. No.	CONNECTOR				Pin No.
CN②	MAIN	CN101	↔	MONITOR	CN761 40
CN③	MAIN	CN106	↔	MIC	— 3
CN④a	MAIN	CN107	↔	CCD	— 20
CN④b	MAIN	CN108	↔	OP BLOCK ASSY	— 22
CN⑤	MAIN	CN104	↔	REAR UNIT	CN1 10
CN⑥	MAIN	CN109	↔	ZOOM UNIT	— 15
CN④c	JACK	CN502	↔	MAIN	CN103 20
CN⑩a	JUNCTION	CN571	↔	MAIN	CN113 34
CN⑩b	JUNCTION	CN574	↔	LOADING MOTOR	— 6
CN⑩c	JUNCTION	CN573	↔	DRUM MOTOR	— 11
CN⑩d	JUNCTION	CN572	↔	SENSOR	— 15
CN⑪a	MAIN	CN110	↔	HEAD	— 8
CN⑪b	MAIN	CN112	↔	CAPSTAN MOTOR	— 18
CN⑪c	MAIN	CN111	↔	ROTARY ENCODER	— 6
CN⑬	MONITOR	CN763	↔	E.VF ASSY (B/W)	CN721 20
CN⑭	MONITOR	CN764	↔	LCD BL	CN751 33/32

Table 1-3-3

- NOTE ⑬a:** To remove the unit, unlock the connector and pull out the unit together with the FPC.
- NOTE ⑬b:** When removing the unit, insert the FPC into the gap.
- NOTE ⑭:** When reassembling the MONITOR ASSY, be careful not to damage any of the parts.
- NOTE ⑮:** Be careful not to damage any of the parts.

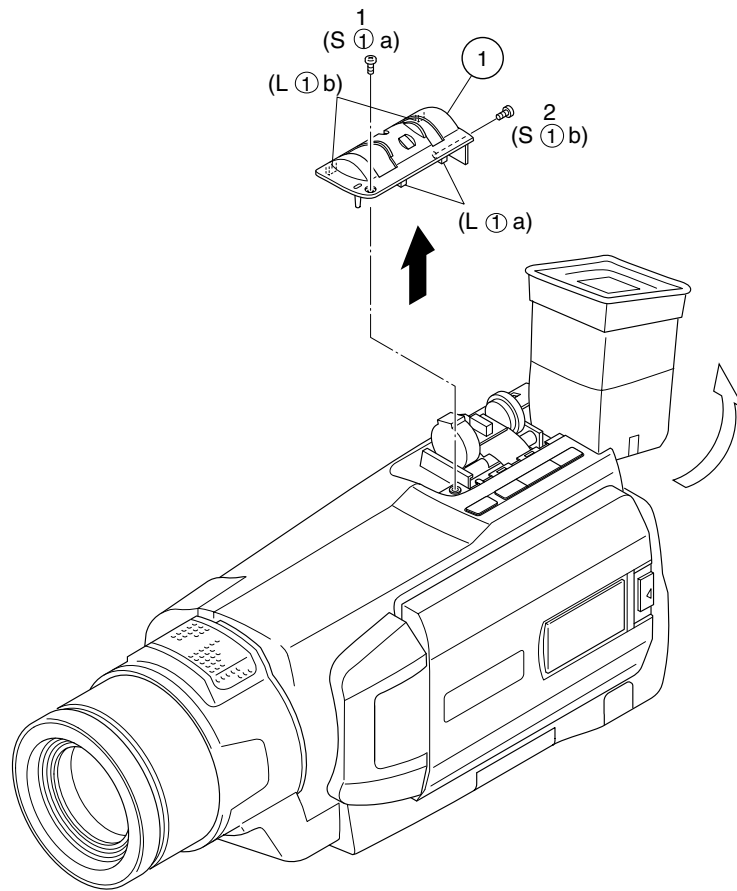


Fig. 1-3-1

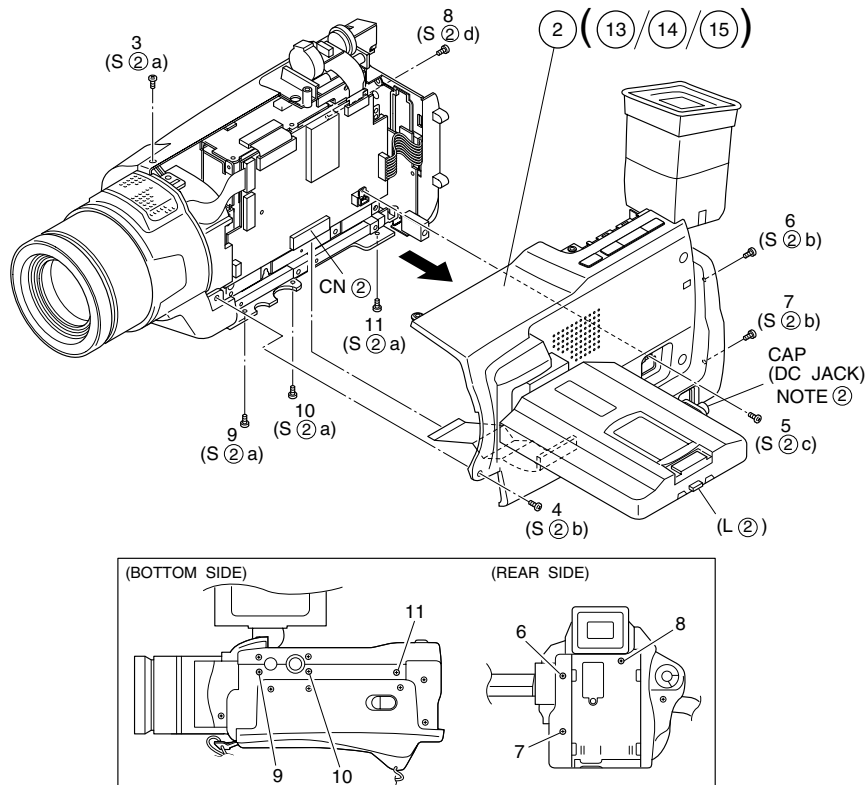


Fig. 1-3-2

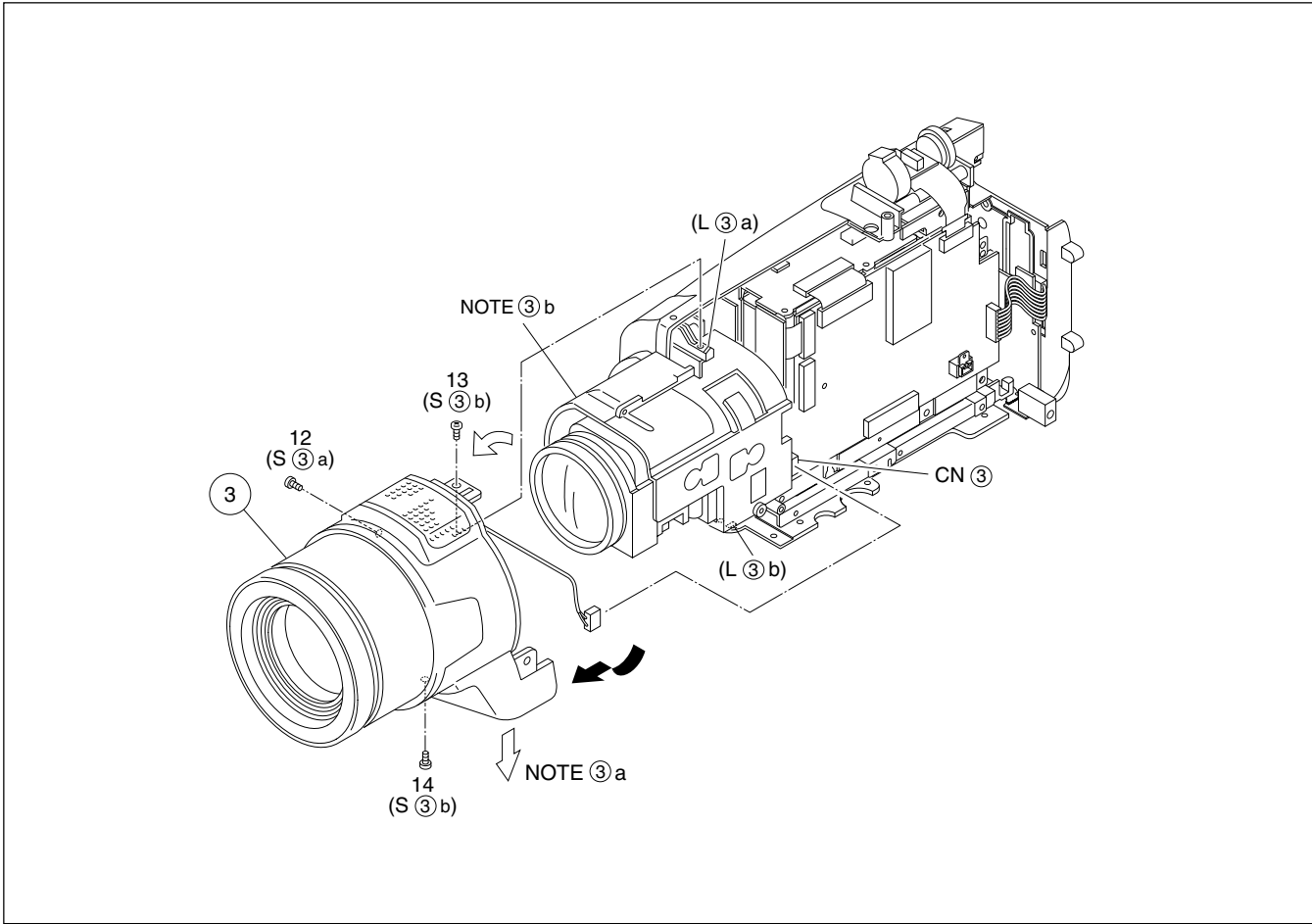


Fig. 1-3-3

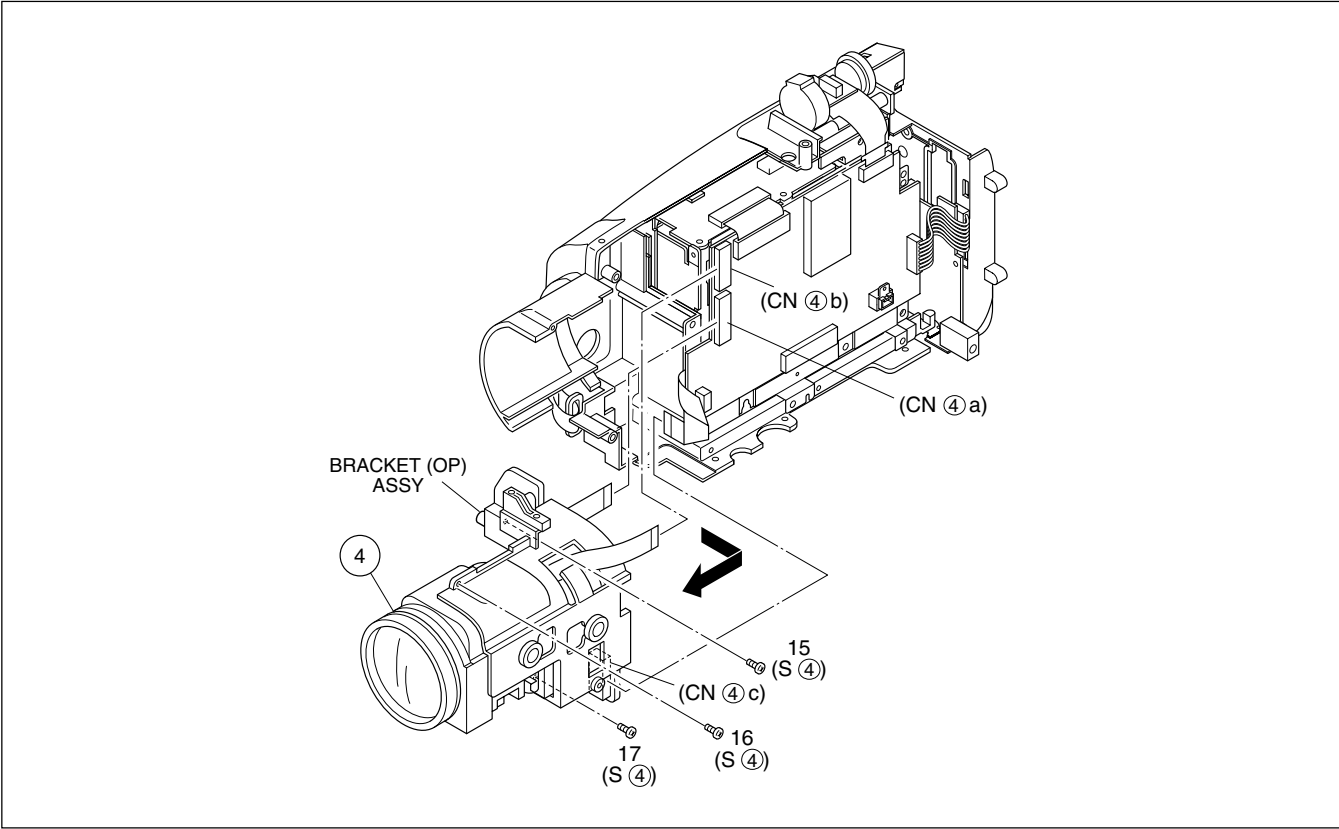
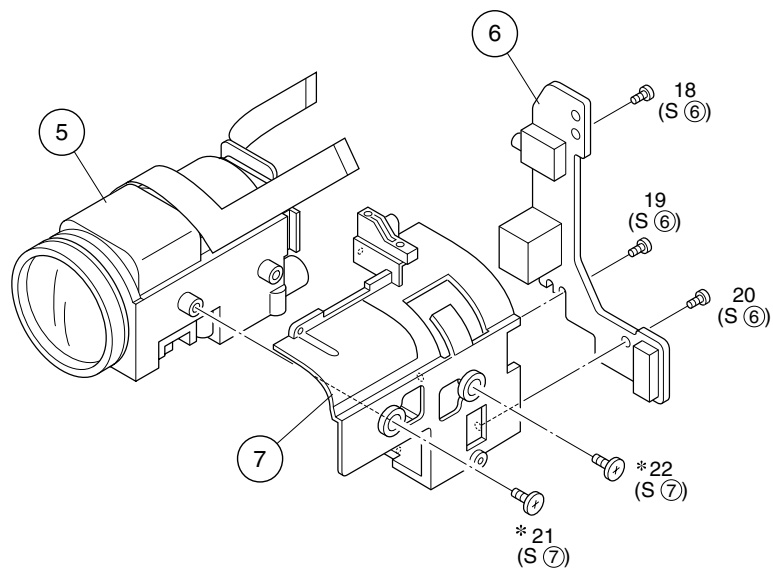


Fig. 1-3-4



* : 0.196 N·m (2.0 kgf·cm)

Fig. 1-3-5

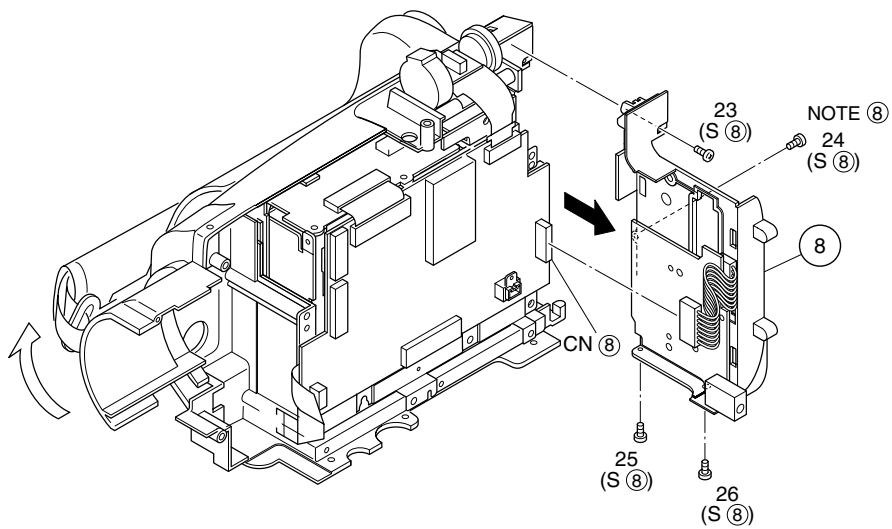


Fig. 1-3-6

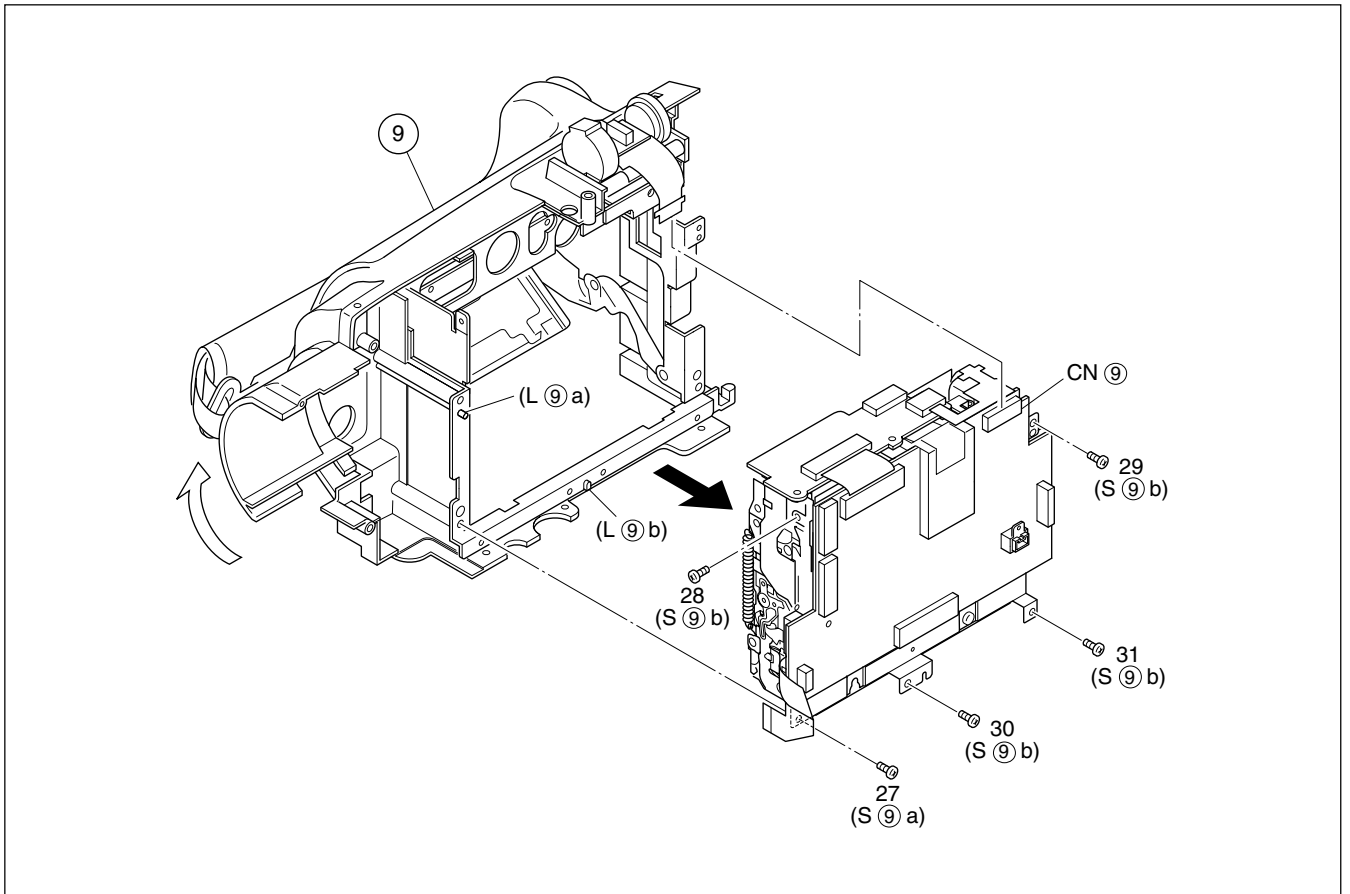


Fig. 1-3-7

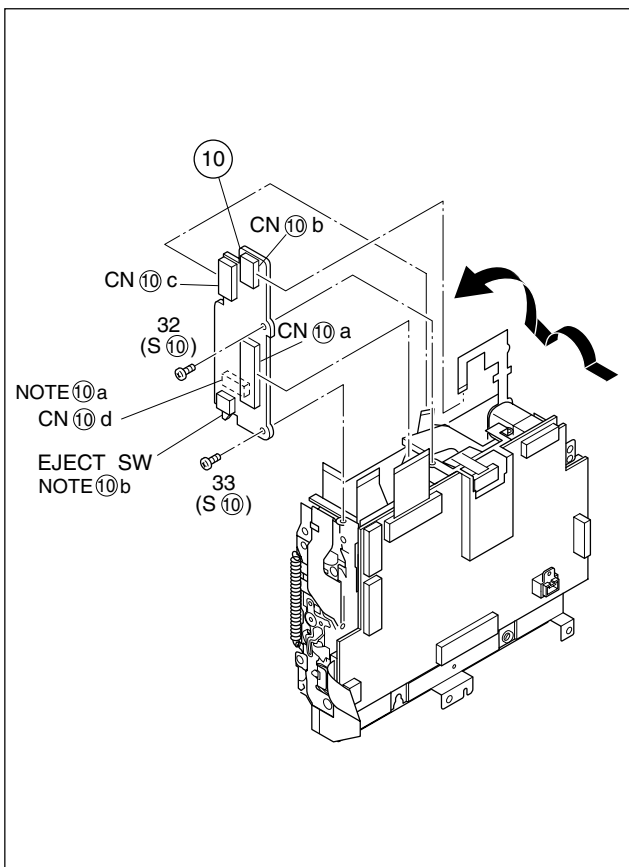


Fig. 1-3-8

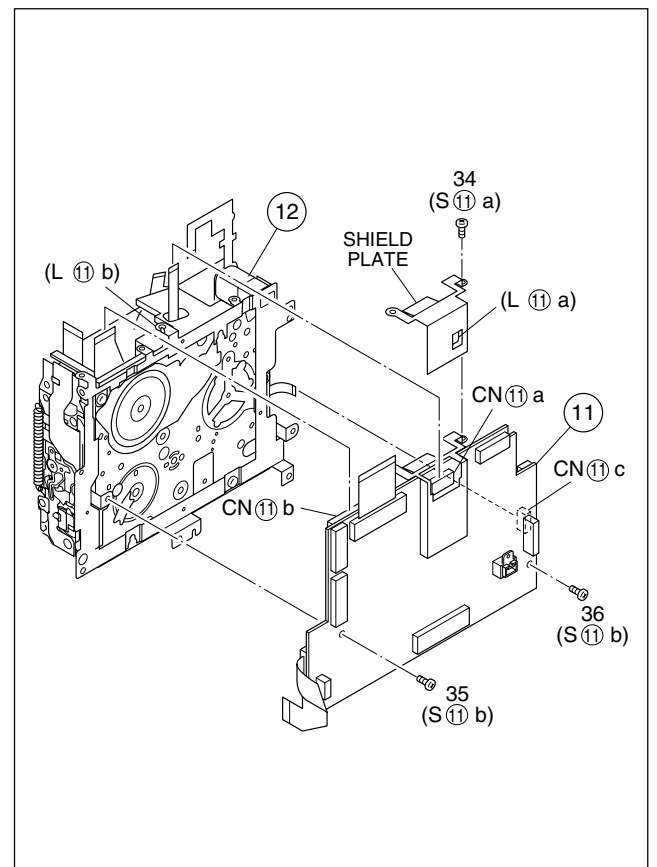


Fig. 1-3-9

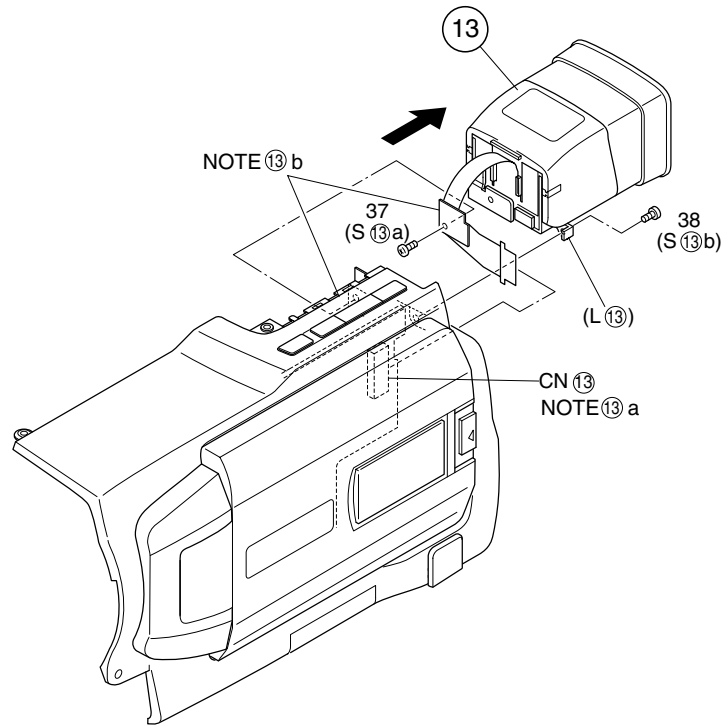


Fig. 1-3-10

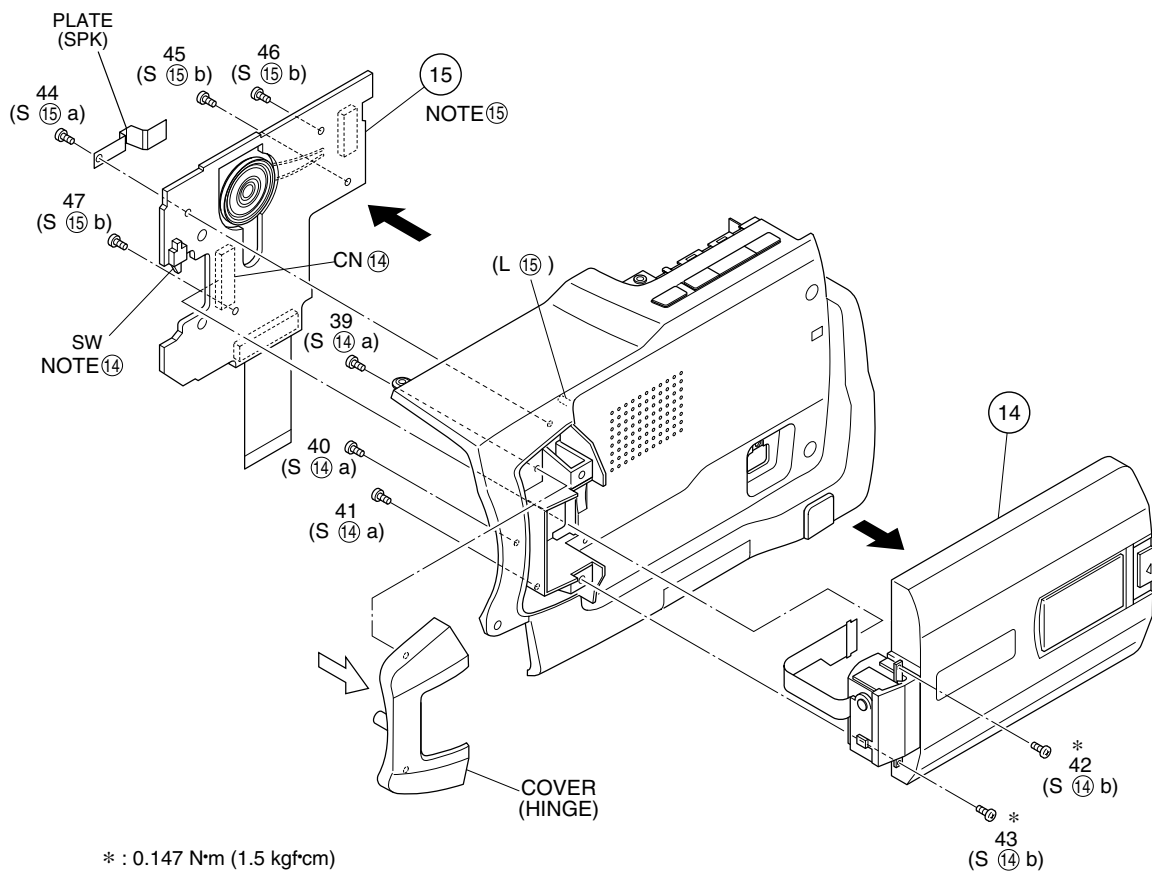


Fig. 1-3-11

1.4 ⑭ MONITOR ASSEMBLY

Note: The shape of the monitor assembly varies by the size of the LCD screen.

For the 2.5"-type LCD, refer to Fig. 1-4-1.

1.4.1 Disassembly/assembly of monitor assembly (for 2.5"-type LCD)

Note: Be careful not to soil or scratch the monitor screen through the disassembly/assembly work.

1. Remove the four screws 1 to 4 in numerical order. While disengaging the six hooks (L⑭a to L⑭f) in alphabetical order, remove the monitor cover assembly.
2. Unlock the connector ③ and then disconnect the FPC while lifting the hinge assembly upwards to remove it together with the FPC.

Note⑭a: For disconnecting the FPC, unlock the connector first and then lift the hinge assembly upwards. Accordingly, the FPC is disconnected together with the hinge assembly.

Note⑭b: Treat the wires carefully.

3. Remove the screw (5), unplug the FPC from the connector ⑤, and then remove the LCD BL board assembly, DIF sheet and bracket (FRM2) in that order.
4. Remove the LCD module.

1.4.2 Disassembly/assembly of hinge assembly (for 2.5"-type LCD)

1. Remove the three screws (6 to 8), and then remove the hinge covers (1) and (2) by disengaging a total of four hooks (L⑭g, L⑭h) at the two sides.
2. Separate the SW board assembly and the FPC from the hinge assembly.

Note⑭c: When connecting the FPC, arrange the FPC wire by winding it around the shaft (hinge pin) of the hinge assembly by two and a half turns while paying heed to the orientation of the hinge assembly and FPC.

Note⑭d: When disassembling/assembling the hinge assembly, pay careful attention to every part not to damage anything.

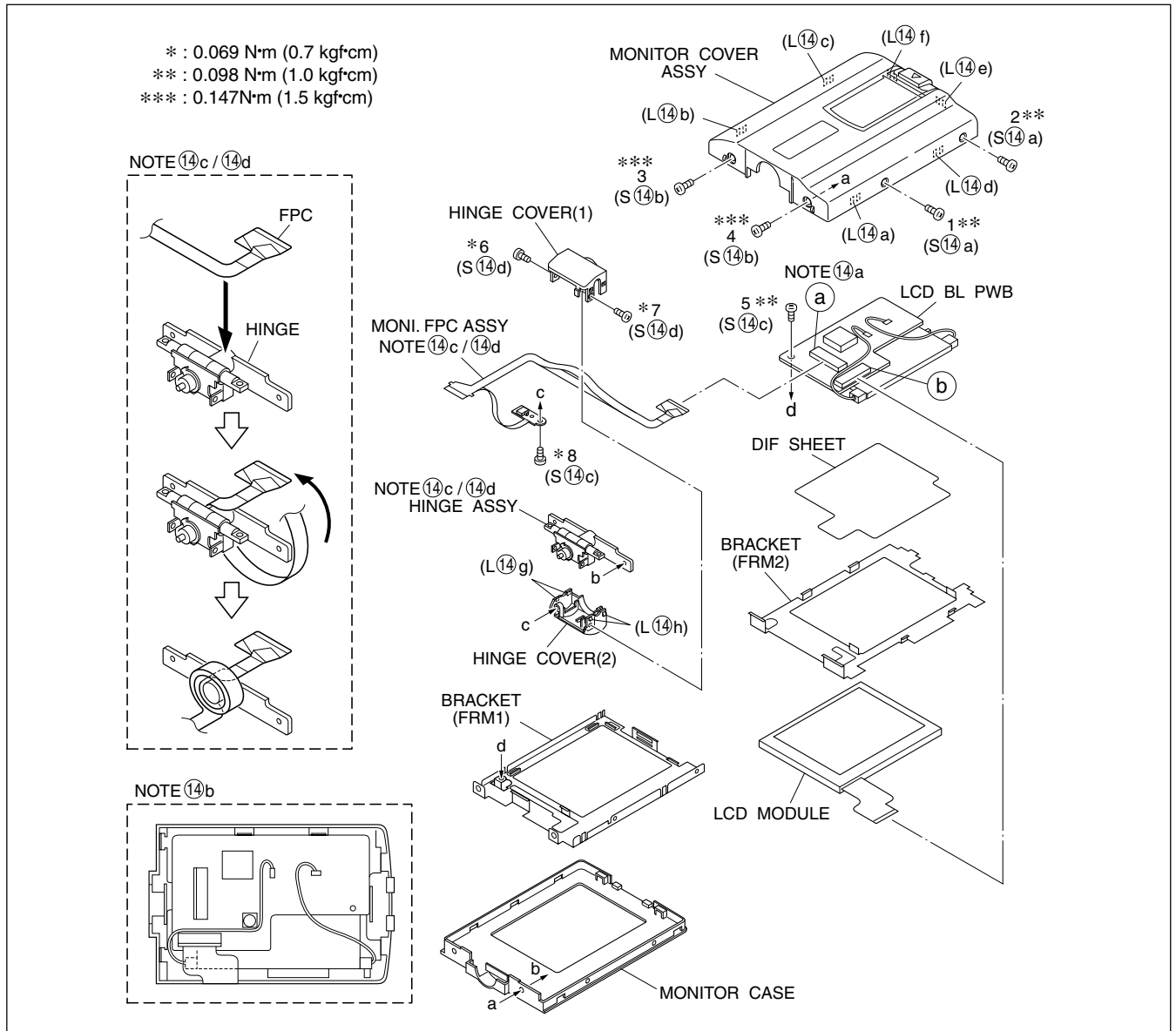


Fig. 1-4-1

1.5 ⑬ E. VF ASSEMBLY (B/W)

1.5.1 Disassembly/assembly of E.VF ASSEMBLY (for the B/W VF)

1. Remove the EYE CUP.
2. Remove the three screws (1 to 3) and then remove the CASE B (VF).
3. Remove the screw (4) to remove the LEVER (VF) and pull out the LENS ASSY.

Note⑬a: Be careful not to lose the SPRING (VF).

4. Remove the three screws (5 to 7) and then remove the VF HINGE ASSY.

Note⑬b: Be careful not to damage the FPC and not to break any wires during the operation.

5. Remove the screw (8) and then remove the CAP (VF).
6. Remove the FPC from the CASE A (VF) so that the CASE A (VF) may be unlocked.
7. Remove the HOLDER LCD (VF) while unlocking it by the both side.

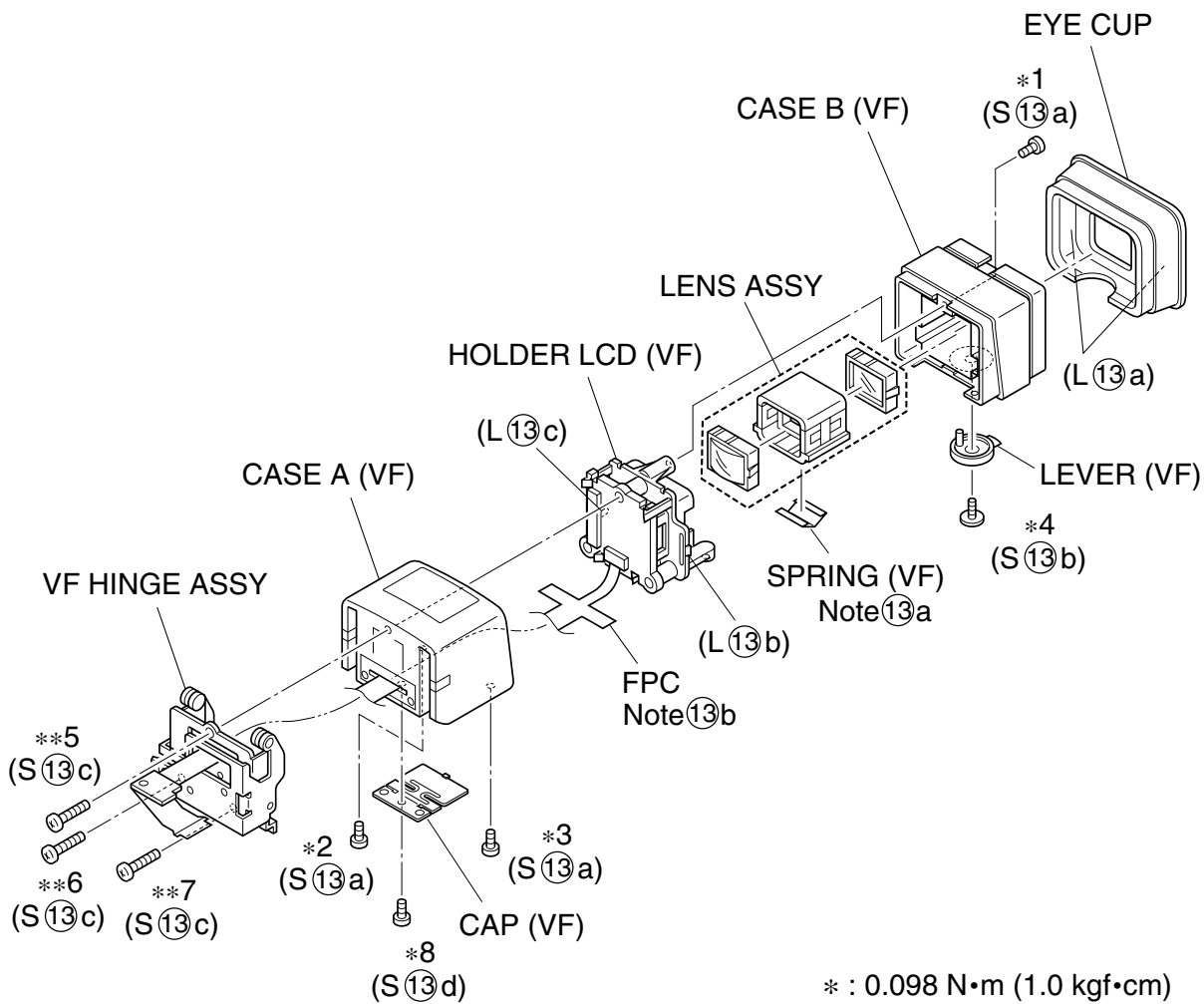


Fig. 1-5-1

1.6 DISASSEMBLY/ASSEMBLY OF ⑤OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY

1.6.1 Precautions

1. Take care in handling the CCD image sensor, optical LPF and lens components when performing maintenance etc., especially with regard to surface contamination, attached dust or scratching. If fingerprints are present on the surface they should be wiped away using either a silicon paper, clean chamois or the cleaning cloth.
2. The CCD image sensor may have been shipped with a protective sheet attached to the transmitting glass. When replacing the CCD image sensor, do not peel off this sheet from the new part until immediately before it is mounted in the OP Block Assembly.
3. The orientation of the optical LPF is an important factor for installation. If there is some marking on the LPF, be sure to note it down before removing and to reassemble it very carefully as it was referring to the marking.

1.6.2 How to remove CCD board assembly and CCD base assembly

1. Unsolder the CCD board assembly by the 14 points (SD⑤) and then remove it.
2. Remove the two screws (1, 2) and remove the CCD base assembly.

Note ⑤a: When removing the CCD base assembly, pay heed to the CCD image sensor because the spacer rubber and optical LPF are occasionally removed together with the CCD image sensor.

Note ⑤b: When replacing the CCD image sensor, don't replace it individually but replace the CCD base assembly in whole with a new one.

1.6.3 How to assemble CCD base assembly and CCD board assembly

1. Install the optical LPF with the spacer rubber attached to its CCD side in the OP block assembly.
- Note ⑤c:** Pay careful attention to the orientation of the LPF.
2. Set the CCD base assembly with careful attention to the spacer rubber not to come off the right position, and fasten them together with the two screws (1, 2).
 3. Set the CCD board assembly in the CCD base assembly, and then solder it by the 14 points (SD⑤).

1.6.4 Replacement of Service Repair Parts

The service repair parts for the OP Block Assembly are as listed below.

Before replacement of these parts, remove the bracket (OP assembly) as required.

Take special care not to disconnect any of the FPC wires or cause any damage due to soldering (excessive heating).

1. Focusing motor
2. Zoom motor
3. Iris motor unit

Note ⑤d: When replacing the focusing motor or the zoom motor, solder the FPC at a space of about 1 mm above the terminal pin.

Note ⑤e: The iris motor unit includes the FPC Assembly and two sensors.

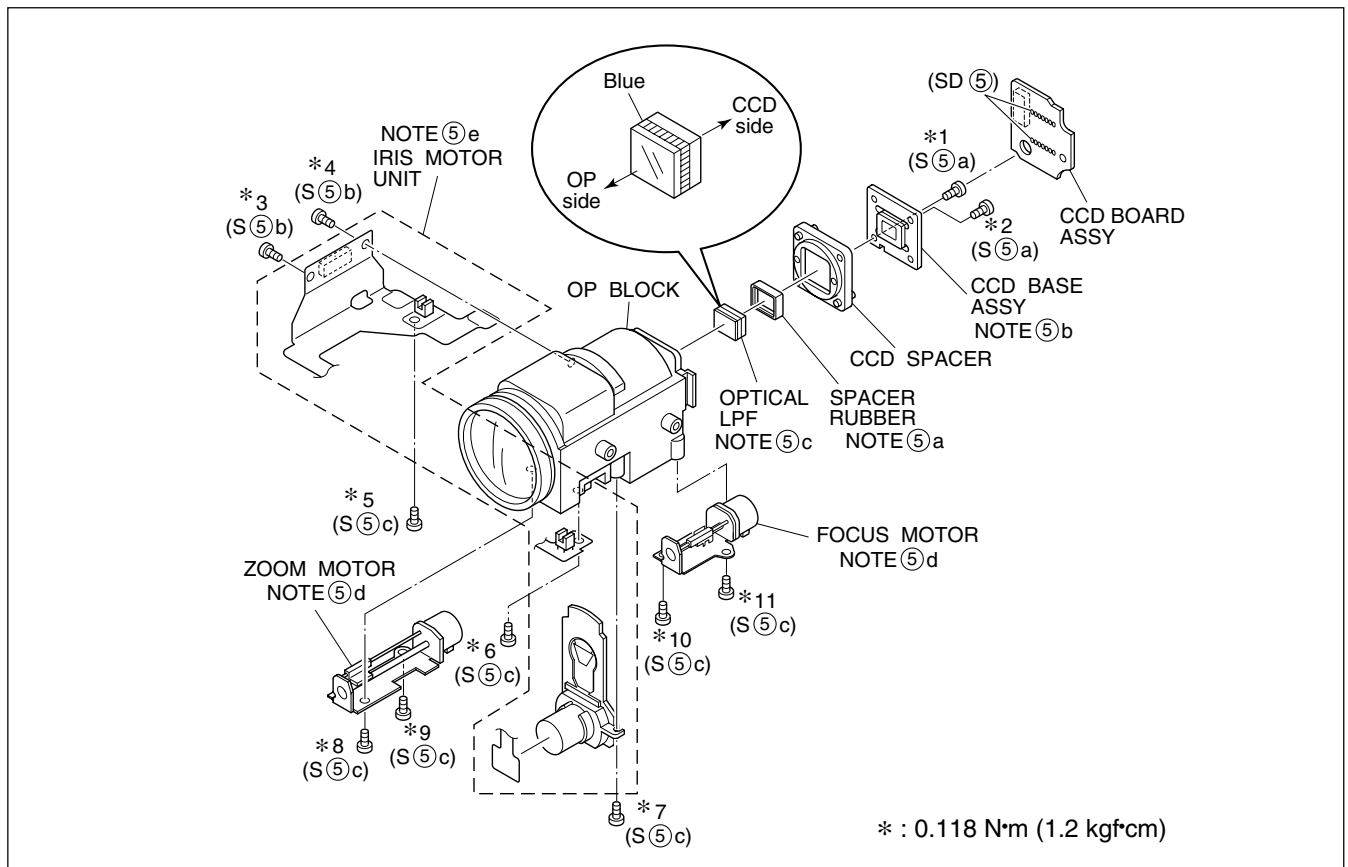


Fig. 1-6-1

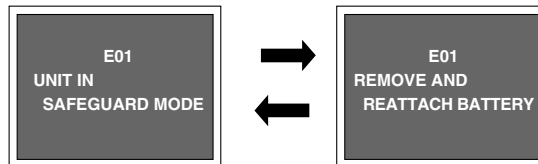
1.7 EMERGENCY DISPLAY

Whenever some abnormal signal is input to the syscon CPU, an error number (E01, as an example) is displayed on the LCD monitor or (in the electronic view finder).

In every error status, such the message as shown below alternately appear over and over.

- In an emergency mode, all operations except turning on/off the POWER switch are ineffectual.

Example (in case of the error number E01):



LCD display	Emergency mode	Details	Possible cause
E01	LOADING	In the case the encoder position is not shifted to the next point though the loading motor has rotated in the loading direction for 4 seconds or more. This error is defined as [E01].	- The mechanism is locked during mode shift. - The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift. - No power is supplied to the loading MDA.
E02	UNLOADING	In the case the encoder position is not shifted to the next point though the loading motor has rotated in the unloading direction for 4 seconds or more. This error is defined as [E02].	- The mechanism is locked during mode shift. - The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift.
E03	TU & SUP REEL FG	In the case no REEL FG is produced for 4 seconds or more in the capstan rotation mode after loading was complete, the mechanism mode is shifted to STOP with the pinch roller set off. This error is defined as [E03]. However, no REEL EMG is detected in the SLOW/STILL mode.	- The idler gear does not engage with the reel disk well. - Though the idler gear and reel disk are engaged with each other, the tape is not wound because of overload to the mechanism. - No FG pulse is output from the reel sensor. - No power is supplied to the reel sensor. - Tape transport operation takes place with a cassette having no tape inside. - The tape slackens and no pulse is produced until the slack is taken up and the tape comes into the normal status.
E04	DRUM FG	In the case there is no DRUM FG input in the drum rotation mode for 4 seconds or more. This error is defined as [E04], and the mechanism mode is shifted to STOP with the pinch roller set off.	- The drum cannot be started or drum rotation is stopped because tape transport load is too high. - Tape tension is extremely high. - The tape is damaged or soiled with grease, etc. - The DRUM FG signal is not received by the syscon CPU. - Disconnection in the middle of the signal line. - Failure of the DRUM FG pulse generator (hall element). - No drum control voltage is supplied to the MDA. - No power is supplied to the DRUM MDA.
E05	—	—	—
E06	CAPSTAN FG	In the case no CAPSTAN FG is produced in the capstan rotation mode for 2 seconds or more. This error is defined as [E06], and the mechanism mode is shifted to STOP with the pinch roller set off. However, no CAPSTAN EMG is detected in the STILL/FF/REW mode.	- The CAPSTAN FG signal is not received by the syscon CPU. - Disconnection in the middle of the signal line. - Failure of the CAPSTAN FG pulse generator (MR element). - No capstan control voltage is supplied to the MDA. - No power is supplied to the CAPSTAN MDA. - The capstan cannot be started or capstan rotation is stopped because tape transport load is too high. - Tape tension is extremely high. (Mechanical locking) - The tape is damaged or soiled with grease, etc. (Tape tangling occurs, etc.)

(DVC_03)

Table 1-7-1

1.8 SERVICE NOTE

Symbol No.	→	①	② (⑬ / ⑭ / ⑮)										③	④				⑤ / ⑥ / ⑦						
Removing order of screw	→	1 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
Place to stick screw	→		*																					
Reference drawing	→	Fig. 1-3-1	Fig. 1-3-2										Fig. 1-3-3				Fig. 1-3-4				Fig. 1-3-5			
Screw tightening torque	→												I								II			

Symbol No.	→	⑧										⑩	⑪ / ⑫		⑬	⑭ / ⑮											
Removing order of screw	→	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	
Place to stick screw	→	* * * * *																*					*	*			
Reference drawing	→	Fig. 1-3-6										Fig. 1-3-7		Fig. 1-3-8		Fig. 1-3-9		Fig. 1-3-10		Fig. 1-3-11							
Screw tightening torque	→	I										I		I		III		I									

	⑭ MONITOR ASSY								⑬ E.VF ASSY(B/W)								
→	1	2	3	4	5	6	7	8	→	1	2	3	4	5	6	7	8
Removing order of screw									→								
Place to stick screw			*	*					→								
Reference drawing	Fig. 1-4-1								→	Fig. 1-5-1							
Screw tightening torque	IV		III		IV		V		→	IV					VI		IV

⑤ OP BLOCK ASSY										⑤ E.VF ASSY(B/W)									
Removing order of screw	1	2	3	4	5	6	7	8	9	10	11								
Place to stick screw																			
Reference drawing	Fig. 1-6-1																		
Screw tightening torque	VII											IV		VI					

< NOTE >

- 1) *: Don't reuse the screw, because screw lock bond was applied to them.
- 2) Pay careful attention to tightening torque for each screw.

I : 0.088N·m (0.9kgf·cm)	II : 0.196N·m (2.0kgf·cm)	III : 0.147N·m (1.5kgf·cm)
IV : 0.098N·m (1.0kgf·cm)	V : 0.069N·m (0.7kgf·cm)	VI : 0.078N·m (0.8kgf·cm)
VII : 0.118N·m (1.2kgf·cm)		

Table 1-8-1

SECTION 2

MECHANISM ADJUSTMENT

2.1 PRELIMINARY REMARKS ON ADJUSTMENT AND REPAIR

2.1.1 Precautions

1. When fastening parts, pay careful attention to the tightening torque of each screw. Unless otherwise specified, tighten a screw with the torque of 0.039 N·m (0.4 kgf·cm).
2. Be sure to disconnect the set from the power supply before fastening and soldering parts.
3. When disconnecting/connecting wires, be careful not to get them and their connectors damaged. (Refer to the Section 1.)
4. When replacing parts, be very careful neither to damage other parts nor to fit wrong parts by mistake.

2.1.2 Notes on procedure for disassembly/assembly

The disassembling procedure table (Table 2-4-1 on page 2-6, a part of the table is shown below for reference) shows the procedure to disassemble/reassemble mechanism parts.

Carefully read the following explanation before starting actual disassembling/reassembling work. The item numbers (circled numbers) in the following explanation correspond to those appearing under respective columns of the table.

- (1) Circled numbers appearing in this column indicate the order to remove parts. When reassembling, follow these numbers in the reverse order. Circled numbers in this column correspond to those appearing in drawings of this section.
- (2) This column shows part names corresponding to circled numbers in the left column.

- (3) The symbol (T or B) appearing in this column shows the side which the objective part is mounted on.
T =the upper side, B =the lower side

- (4) Symbols appearing in this column indicate drawing numbers.

Step Part Name Fig. Point Note Remarks

- (5) This column indicates parts and points such as screws, washers, springs, and others to be removed/fitted for disassembling/reassembling the mechanism. Besides such the parts, this column occasionally indicates working points.

P = Spring
W = Washer
S = Screw
* = Lock (L), soldering (SD), shield, connector (CN), etc.

- Example
- Remove (W1)=Washer W1.
 - *Remove the solder at (SD①)=Point SD①.
 - *Disconnect (A) =Connector (A) .

- (6) Numbers in this column represent the numbers of notes in the text. For example, “①” means “Note ①”.
(For parts that need phase adjustment after reassembling, refer to “2.6 MECHANISM ADJUSTMENTS”.)

- (7) This column indicates required after disassembling/reassembling work such as phase adjustment or mechanism adjustment.

NO.	PART NAME		FIG.	POINT	NOTE	REMARKS
①	Cassette housing assembly	T	Fig. 2-4-5	3(S1),(L1a)-(L1d)	1a, 1b, 1c, 1d	Adjustment
②a	Reel disk (SUP) assembly	T	Fig. 2-4-6	(W2)	2a, 2b	
②b	Reel disk (TU) assembly	T		(W2)	2a, 2b	
②c	Reel cover assembly	T		(S2b),2(S2a),(W2)	2d	
③a	Tension arm assembly	T	Fig. 2-4-7	(W3a)	3b	
③b	Release guide assembly	T		-	3a	
③c	Idler arm assembly	T		(W3b)	-	
③d	Guide arm assembly	T		-	3a	
③e	Pinch roller arm assembly	T		(W3a)	-	
④a	Cleaner arm assembly	T	Fig. 2-4-8	(L4a)	4a	
④b	Slant pole arm assembly	T		(W4),(L4b),(P4a),(P4b)	4b	
④c	Drum assembly	T	Fig. 2-4-9	3(S4)	-	
⑤a	Guide roller (S) assembly	T		(P5)	5a	
⑤b	Rail assembly	T		3(W5a), (W5b)	5b, 5c	

↑
(1)

↑
(2)

↑
(3)

↑
(4)

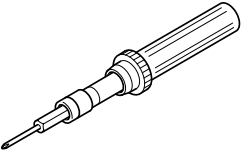
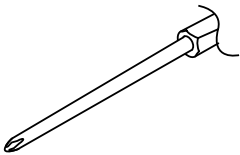
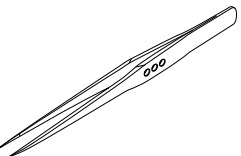
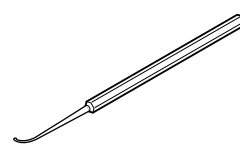
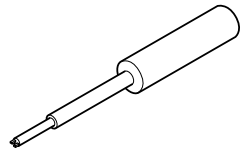
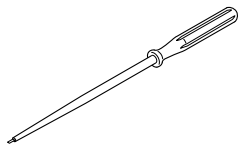
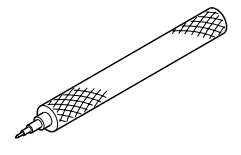
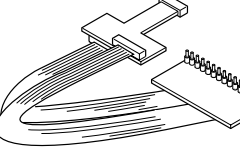
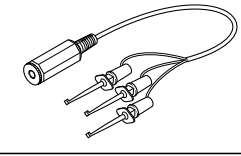
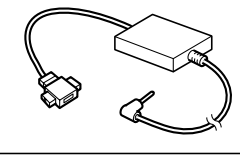
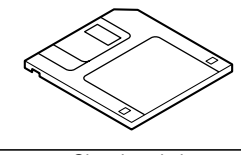
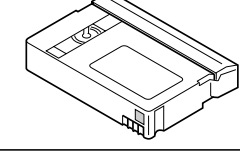
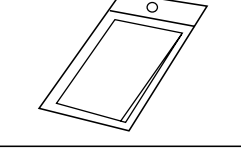
↑
(5)

↑
(6)

↑
(7)

2.2 JIGS AND TOOLS REQUIRED FOR DISASSEMBLY, ASSEMBLY AND ADJUSTMENT

2.2.1 Tools required for adjustments

1	Torque driver YTU94088	2	Bit YTU94088-003
			
3	Tweezers P-895	4	Chip IC replacement jig PTS40844-2
			
5	Guide driver YTU94148A	6	Adjustment driver YTU94028
			
7	Slit washer installation jig YTU94121A	8	Jig connector cable YTU93082G
			
9	Communication cable YTU93107A	10	PC cable QAM0099-002
			
11	Service support system YTU94057-60	12	Alignment tape MC-2
			
13	Cleaning cloth KSMM-01		
			

1. Torque driver

Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.

2. Bit

This bit is slightly longer than those set in conventional torque drivers.

3. Tweezers

To be used for removing and installing parts and wires.

4. Chip IC replacement jig

To be used for adjustment of the camera system.

5. Guide driver

To be used to turn the guide roller to adjustment of the linearity of playback envelope.

6. Adjustment driver

To be used for adjustment.

7. Slit washer installation jig

To be used to install slit washers.

8. Jig connector cable

Connected to CN105 of the main board and used for electrical adjustment, etc.

9. Communication cable

Connect the Communication cable between the PC cable and Jig connector cable when performing a PC adjustment.

10. PC cable

To be used to connect the VideoMovie and a personal computer with each other when a personal computer is used for adjustment.

11. Service support system

To be used for adjustment with a personal computer.

12. Alignment tape

To be used for check and adjustment of interchangeability of the mechanism.

13. Cleaning cloth

Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

Table 2-2-1

2.3 DISASSEMBLY/ASSEMBLY OF MECHANISM

ASSEMBLY

2.3.1 General statement

The mechanism should generally be disassembled/assembled in the EJECT mode (ASSEMBLY mode). (Refer to Fig. 2-3-1.)

However, when the mechanism is removed from the main body, it is set in the STOP mode. Therefore, after the mechanism is removed from the main body, supply 3 V DC to the electrode on the top of the loading motor to enter the mechanism mode into the EJECT mode compulsory.

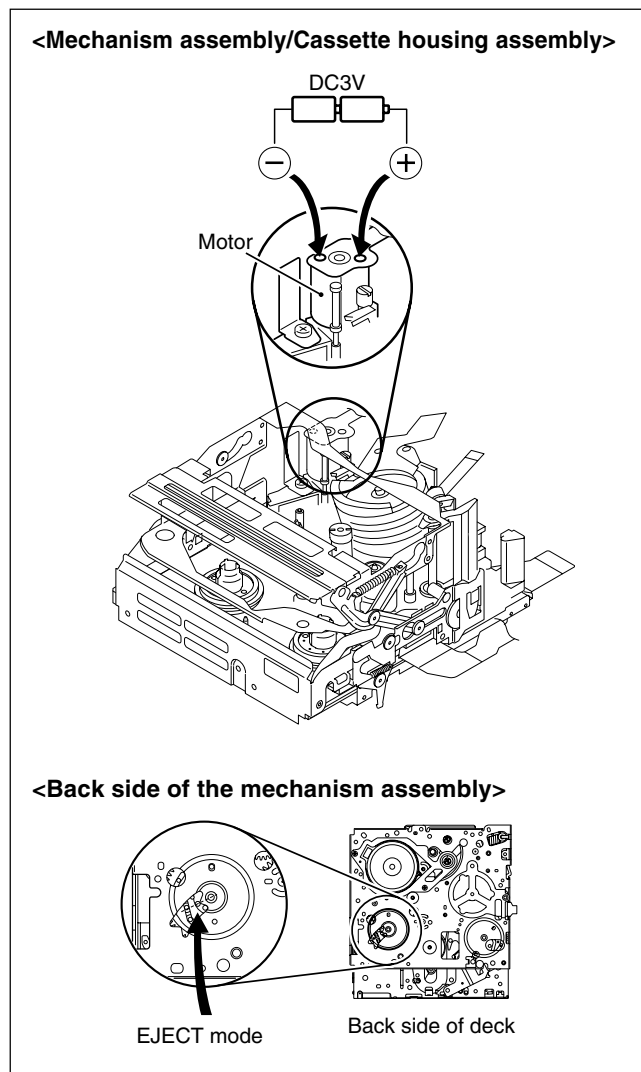


Fig. 2-3-1

2.3.2 Explanation of mechanism mode

The mechanism mode of this model is classified into six modes as shown in Table 2-3-1. Each mechanism mode can be distinguished from others by the relative position of "○" mark on the sub cam gear to the inner or outer protrusion on the main deck.

Refer to Fig. 2-3-2 to 2-3-8 below.

The EJECT mode, C IN mode and SHORT FF mode should be recognized by the relative position of the "○" mark to the inner protrusion, while the STOP mode, REV mode and PLAY mode should be recognized by that to the outer protrusion.

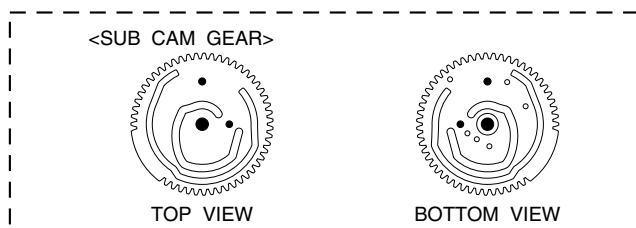


Fig. 2-3-2

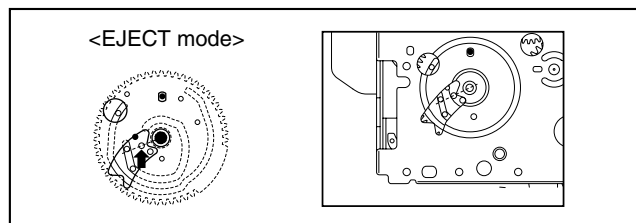


Fig. 2-3-3

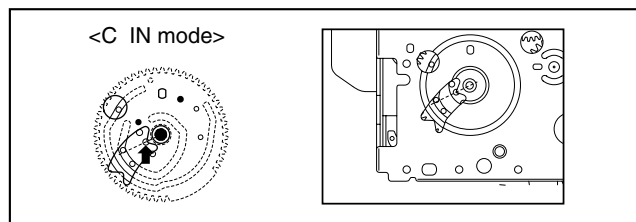


Fig. 2-3-4

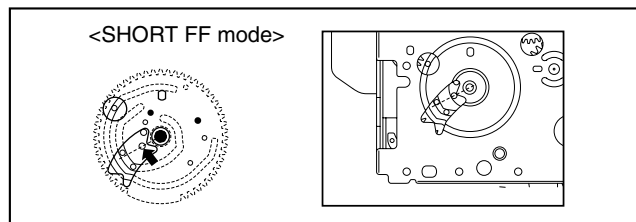


Fig. 2-3-5

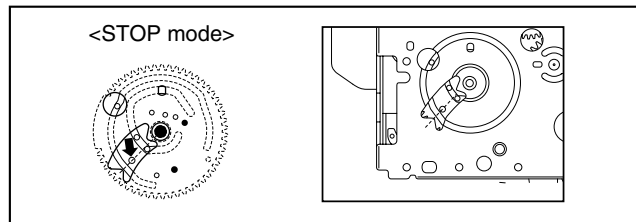


Fig. 2-3-6

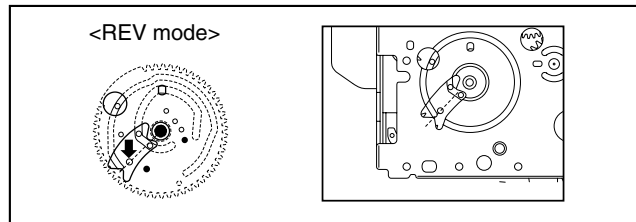


Fig. 2-3-7

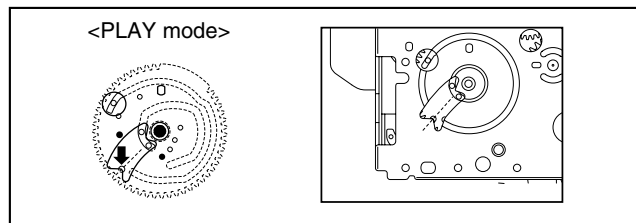


Fig. 2-3-8

2.3.3 Mechanism timing chart

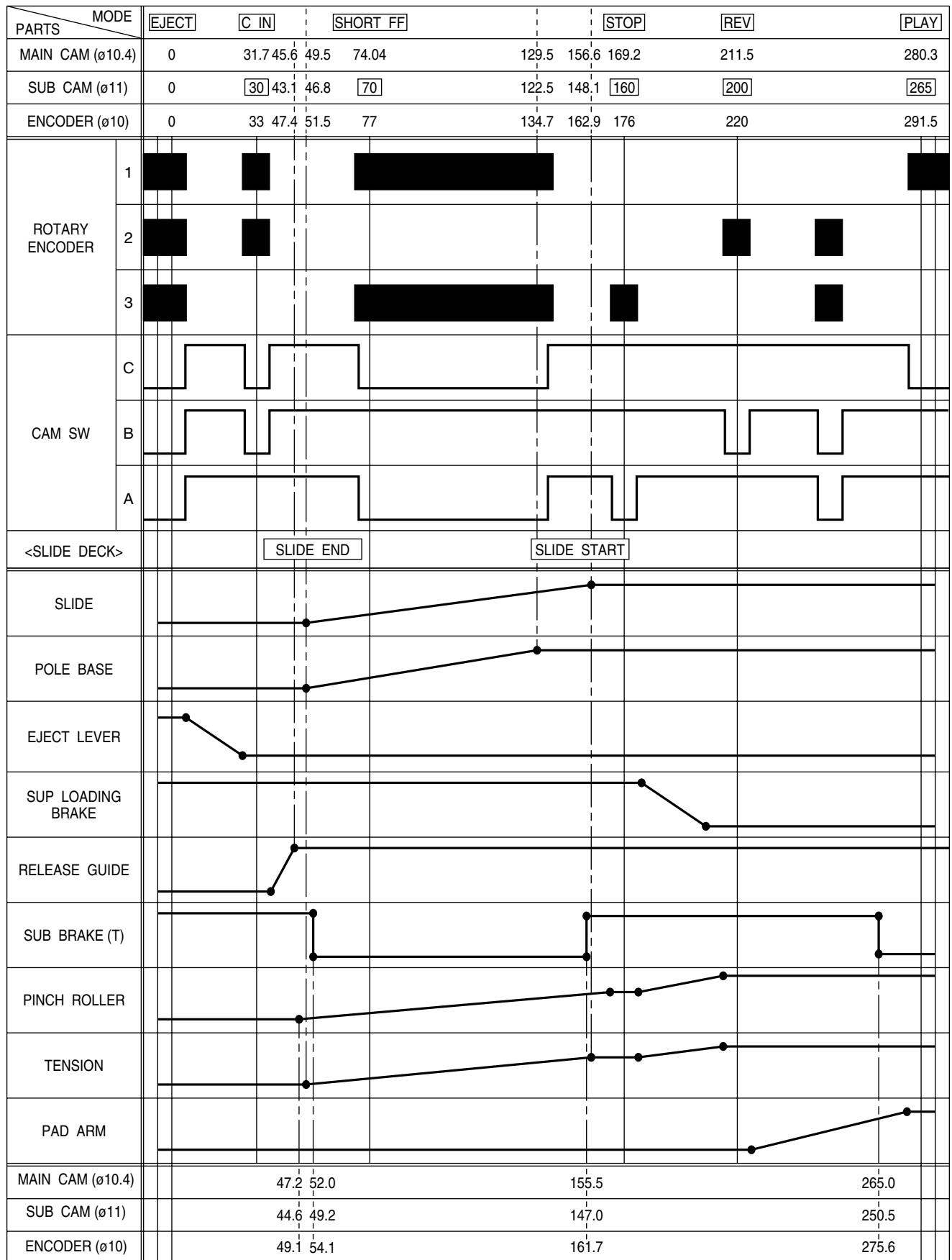


Table 2-3-1

2.4 DISASSEMBLY/ASSEMBLY OF MECHANISM ASSEMBLY

2.4.1 Follow chart

1. Configuration

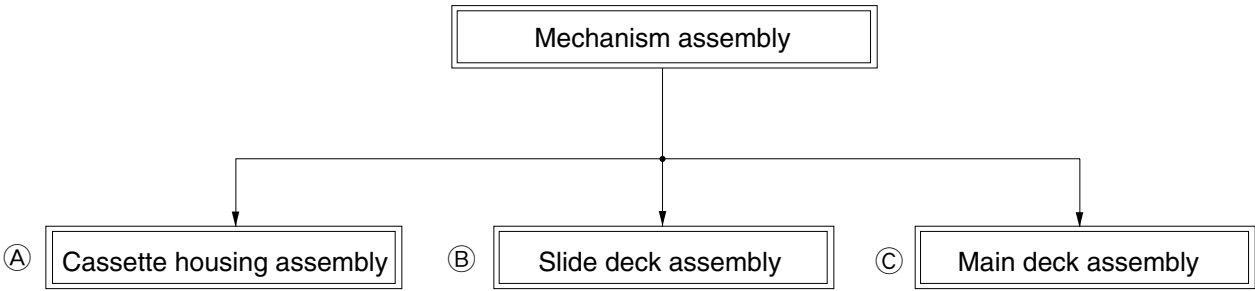


Fig. 2-4-1

2. Procedures for disassembly

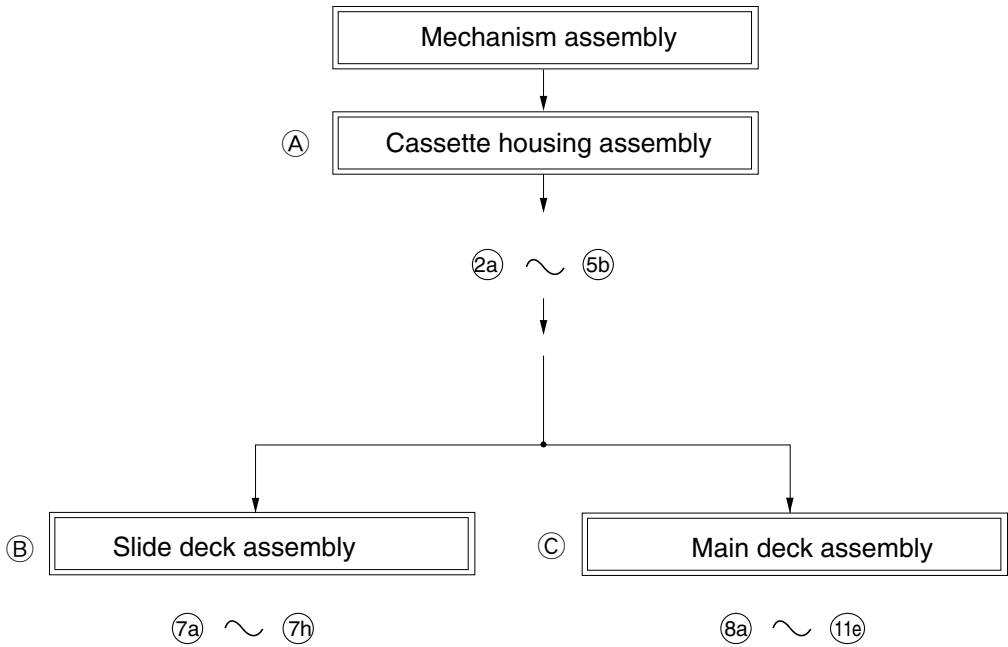


Fig. 2-4-2

3. Disassembling procedure table

NO.	PART NAME		FIG.	POINT	NOTE	REMARKS
①A	Cassette housing assembly	T	Fig. 2-4-5	3(S1),(L1a)-(L1d)	1a, 1b, 1c, 1d	Adjustment
②a	Reel disk (SUP) assembly	T	Fig. 2-4-6	(W2)	2a, 2b	
②b	Reel disk (TU) assembly	T		(W2)	2a, 2b	
②c	Reel cover assembly	T		(S2b),2(S2a),(W2)	2c, 2d	
③a	Tension arm assembly	T	Fig. 2-4-7	(W3a)	3b	
③b	Release guide assembly	T		-	3a	
③c	Idler arm assembly	T		(W3b)	-	
③d	Guide arm assembly	T		-	3a	
③e	Pinch roller arm assembly	T		(W3a)	-	
④a	Cleaner arm assembly	T	Fig. 2-4-8	(L4a)	4a	
④b	Slant pole arm assembly	T		(W4),(L4b),(P4a),(P4b)	4b	
④c	Drum assembly	T		3(S4)	-	
⑤a	Guide roller (S) assembly	T	Fig. 2-4-9	(P5)	5a, 5b	
⑤b	Rail assembly	T		3(W5a), (W5b)	5c, 5d	
①B	Slide deck assembly / ①C Main deck assembly	T	Fig. 2-4-10	(W6),(L6a)-(L6d)	6a, 6b	(Adjustment)
①B	Slide deck assembly					
⑦a	Loading brake assembly	T	Fig. 2-4-11	(W7),(L7a),(P7a)	7e	Adjustment
⑦b	Guide pin (S)	T		(S7a)	-	
⑦c	Pad arm assembly	T		(W7),(L7b),(P7b)	7d	
⑦d	Slide guide plate assembly	T		(S7b)	7c	Adjustment
⑦e	Collar	T		-	7a	
⑦f	Collar	T		-	7a	
⑦g	Sub brake assembly	T		(W7),(L7c),(P7c)	7b	
⑦h	Control plate assembly	T		2(W7),(L7d),(P7d)	7b	
①C	Main deck assembly					
⑧a	Tension lever assembly	T	Fig. 2-4-12	-	8c	
⑧b	Slide lever assembly	T		-	8b	
⑧c	Brake control lever assembly	T		-	8a	
⑨a	Loading guide	T	Fig. 2-4-13	(S9)	-	
⑨b	Timing belt	T		-	9b	
⑨c	Center gear assembly	T		-	-	
⑨d	Motor bracket assembly	T		2(S9)	9a	
⑨e	Worm wheel	T		(W9)	-	(Phase adjustment)
⑨f	Gear holder	T		(S9)	-	
⑩a	Main cam gear	T	Fig. 2-4-14	(S10)	10b	Phase adjustment
⑩b	Brake control plate	T		(L10)	10b	Phase adjustment
⑩c	Rotary encoder	T		(S10),(W10a)	10a	Phase adjustment
⑩d	Connect gear	T		(W10a)	-	(Phase adjustment)
⑩e	Reel drive pulley assembly	T		(W10b)	-	
⑪a	Catcher (T) assembly	T	Fig. 2-4-15	2(S11)	-	
⑪b	Capstan motor	T		2(S11)	-	
⑪c	Charge arm assembly	T		(W11)	11	
⑪d	Sub cam gear	T		(S11)	-	Phase adjustment
⑪e	PWB holder	B		2(S11)	-	

Table 2-4-1

< TOP VIEW >

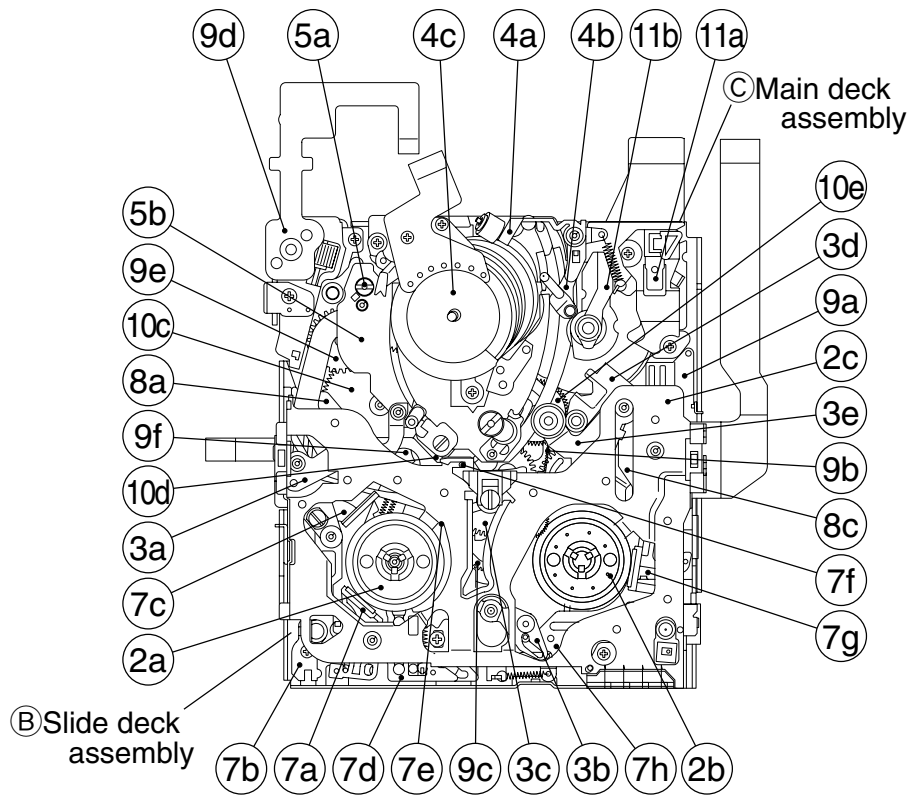


Fig. 2-4-3

< BOTTOM VIEW >

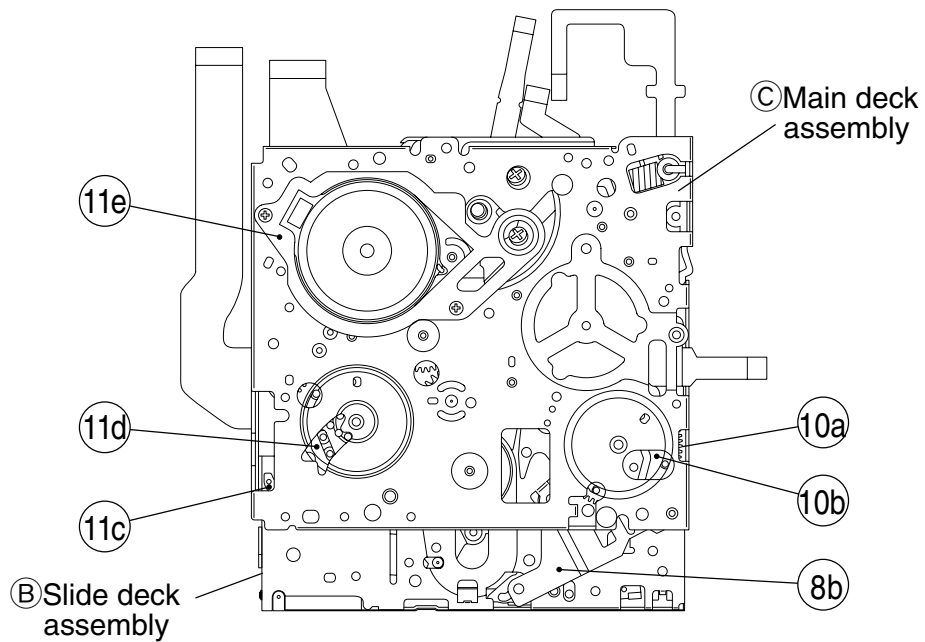


Fig. 2-4-4

2.4.2 Disassembly/assembly

1. ① Cassette housing assembly

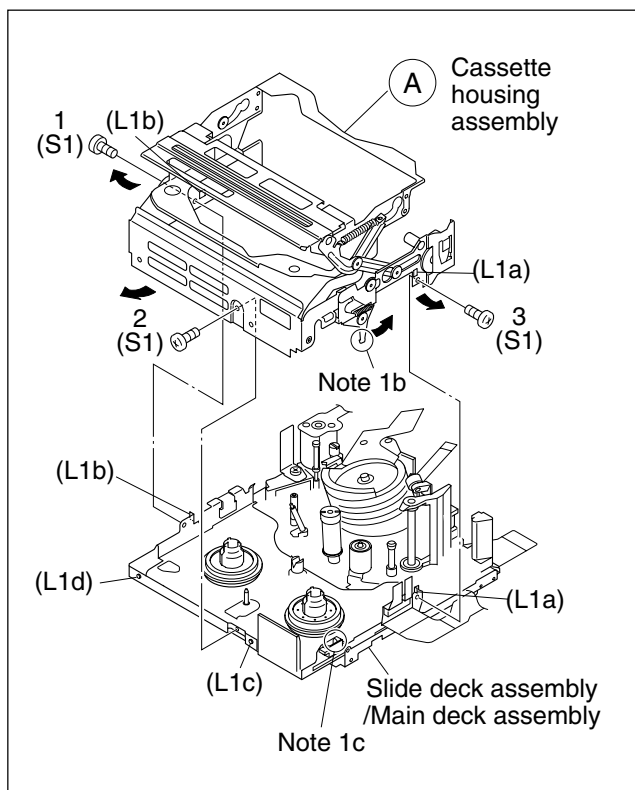


Fig. 2-4-5

2. ②a Reel disk (SUP) assembly

②b Reel disk (TU) assembly

②c Reel cover assembly

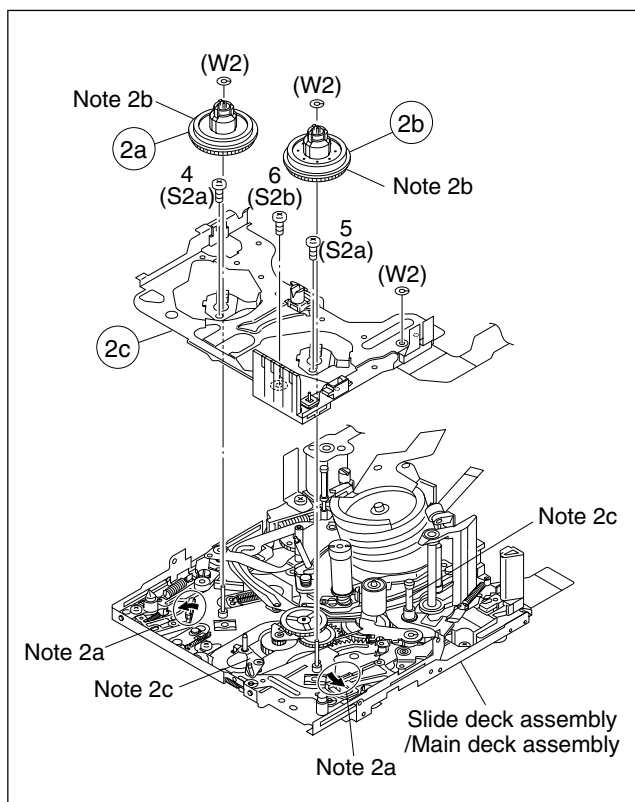
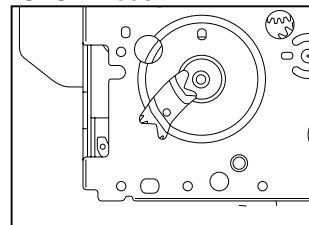
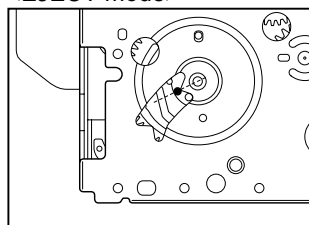


Fig. 2-4-6

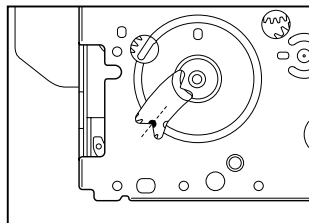
<STOP mode>



<EJECT mode>



<PLAY mode>



Note 1a:

Shift the mechanism mode from the STOP mode to the EJECT mode.

Note 1b:

Reassemble the cassette housing assembly to the mechanism as the cancel lever is moved in the direction of the arrow.

Note 1c:

When reassembling the cassette housing to the mechanism, make sure that there is no deformation in the frame or no damage to the switches, etc.

Note 1d:

After reassembling the component parts, check the mechanism operation in the PLAY mode.

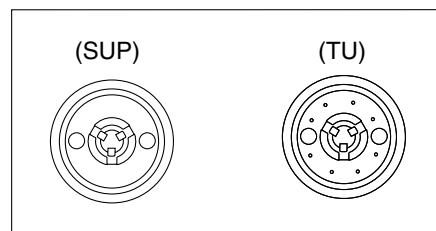
For details of checking method, refer to "2.6.1 assembling slide deck assembly and main deck assembly".

Note 2a:

When removing the reel disk assembly, be careful not to break the brake pad which applies lateral pressure to the reel disk.

Note 2b:

Be careful not to make a mistake in installing the reel disk. The SUP reel disk and TU reel disk can be distinguished from each other by the appearance as shown below.



Note 2c:

When reassembling the cassette housing to the mechanism, make sure that there is no deformation in the frame or no damage to the switches, etc.

Note 2d:

When fitting the reel cover assembly to the set, carefully tighten the screw with the specified tightening torque of 0.069N·m (0.7kgf·cm).

3. ③a Tension arm assembly/ ③b Release guide assembly
 ③c Idler arm assembly/ ③d Guide arm assembly
 ③e Pinch roller arm assembly

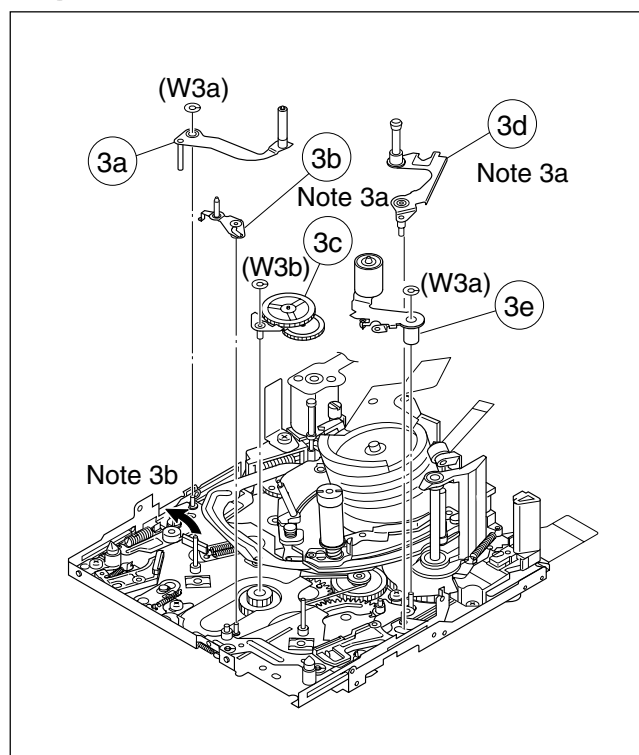


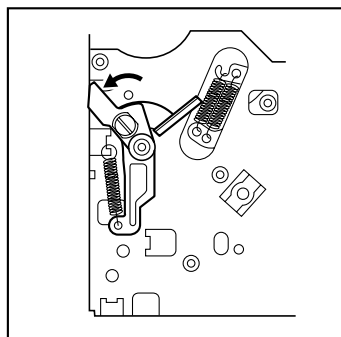
Fig. 2-4-7

Note 3a:

When removing the reel cover assembly, pay heed to release guide assembly and guide arm assembly. For the guide arm assembly is just inserted into the slide deck assembly from the upside and it is apt to come off after the reel cover assembly is removed.

Note 3b:

Reassemble the tension arm assembly to the mechanism as the pad arm assembly is moved to the extent in the direction of the arrow.



4. ④a Cleaner arm assembly/ ④b Slant pole arm assembly
 ④c Drum assembly

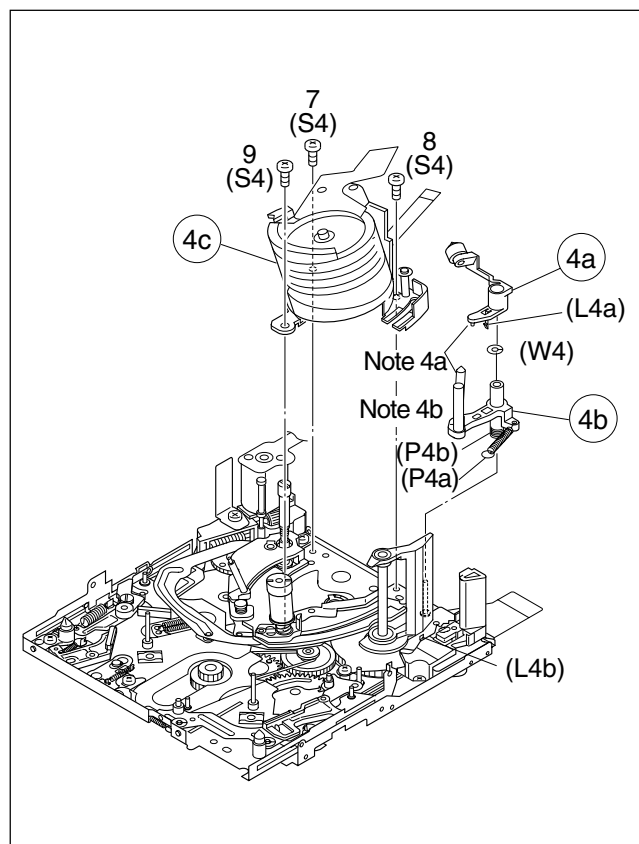


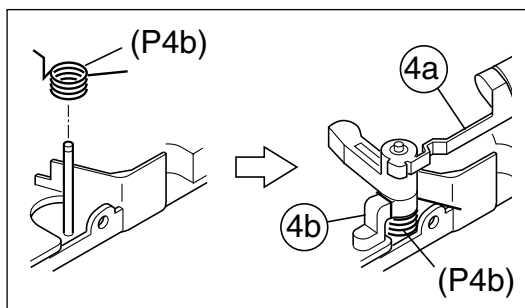
Fig. 2-4-8

Note 4a:

When removing the cleaner arm assembly, it is recommended to remove the slant pole arm assembly together with it except the case of a single unit replacement, because the hook (L4a) is hard to disengage.

Note 4b:

How to set the coil spring (P4b).



5. 5a Guide roller (S) assembly/ 5b Rail assembly

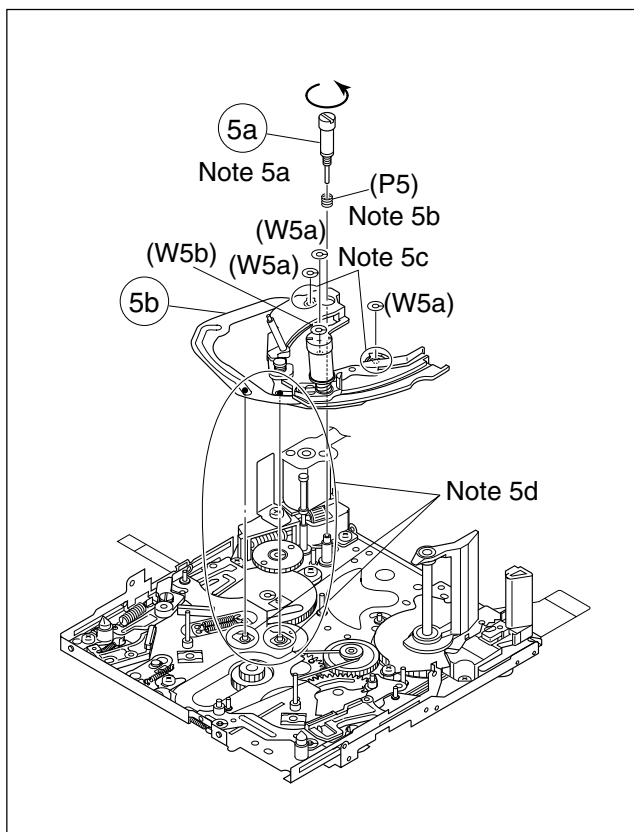
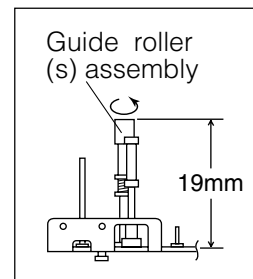


Fig. 2-4-9

Note 5a:

When reassembling, insert the tip of the guide roller with the coil spring put on it into the hole on the main deck. Tighten the guide roller by about 6 turns so that the height of the guide roller assembly is 19 mm or so as shown in the figure.



Note 5b:

Pay careful attention to the spring not to lose it.

Note 5c:

Pay careful attention to the engagement of the rail assembly's arm ends because they easily come off the engagement. Moreover, make sure that there is neither deformation nor damage observed in them.

Note 5d:

When removing the rail assembly, check to see if the collar is securely set in the arm groove.

6. B Slide deck assembly/ C Main deck assembly

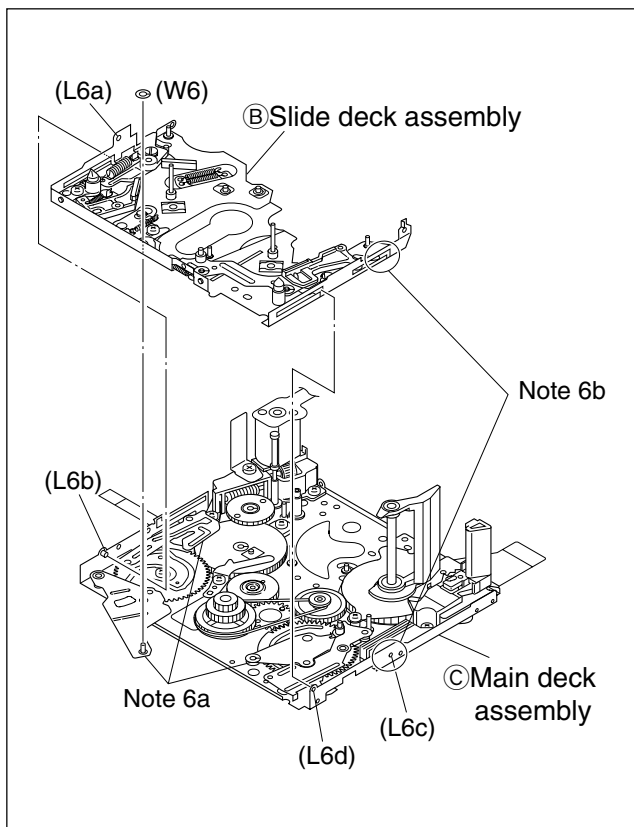


Fig. 2-4-10

Note 6a:

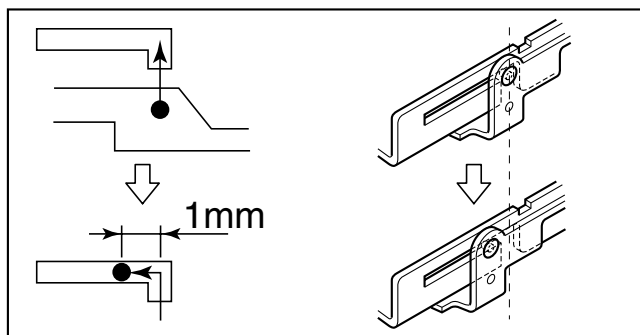
When removing the slide deck assembly, pay heed to the three components of the following because they are apt to come off after the slide deck assembly is removed.

- 8a Tension lever assembly/ 8b Slide lever assembly
- 8c Brake control lever assembly

For reassembling those components, refer to Fig. 2-4-12.

Note 6b:

When reassembling the slide deck assembly to the main deck assembly, combine them with each other by the side grooves and then slide the slide deck assembly by 1 mm or so.



7. ⑦a Loading brake assembly/ ⑦b Guide pin (S)
 ⑦c Pad arm assembly/ ⑦d Slide guide plate assembly
 ⑦e Collar/ ⑦f Collar/ ⑦g Sub brake assembly
 ⑦h Control plate assembly

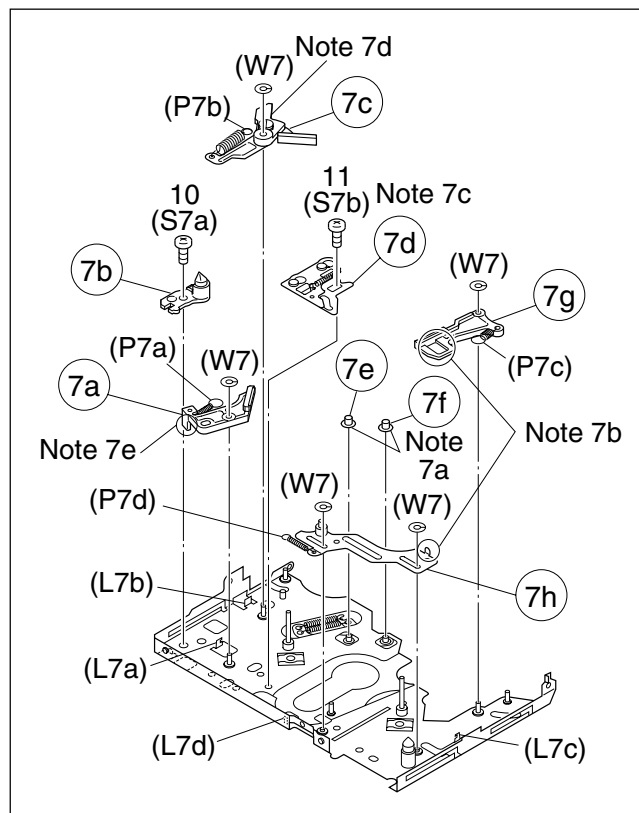


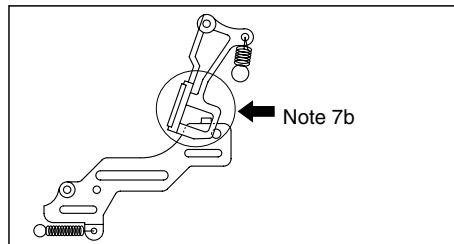
Fig. 2-4-11

Note 7a:

Don't remove these parts unreasonably. If they are removed for some reason, be very careful not to lose them.

Note 7b:

When reinstalling the sub brake assembly, set the control plate assembly so that its hook is set in the ☐ part of the sub brake assembly.



Note 7c:

Since the slide guide plate assembly controls the slide deck assembly so that it exactly slides the main deck assembly, it must exactly be assembled in the PLAY mode. Therefore, temporarily fix the slide guide plate assembly in this stage. For details of reassembling procedure, refer to "2.6.1 Assembling slide deck assembly and main deck assembly".

Note 7d:

The pad arm assembly controls the tension level of the tension arm assembly. For adjustment of the tension arm assembly, refer to "2.6.2 Locating tension pole".

Note 7e:

When reinstalling the load brake assembly, slightly lift the slide deck assembly upwards because the lower part of the load brake assembly sticks out of the slide deck assembly.

8. ⑧a Tension lever assembly/ ⑧b Slide lever assembly
 ⑧c Brake control lever assembly

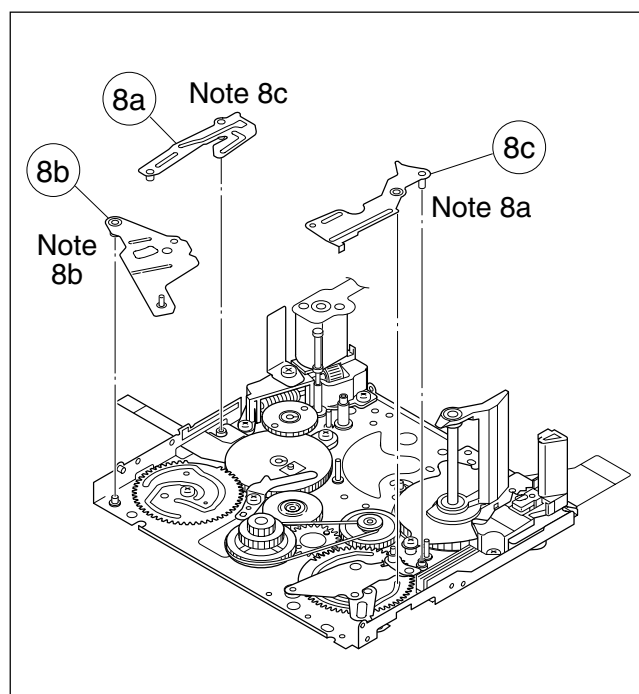
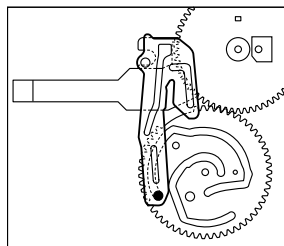


Fig. 2-4-12

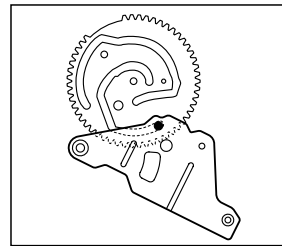
Note 8a, 8b, 8c:

For refitting the respective parts, refer to the following figures

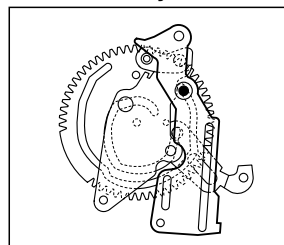
⑧a Tension lever assembly



⑧b Slide lever assembly



⑧c Brake control lever assembly



9. ⑨a Loading guide/ ⑨b Timing belt
 ⑨c Center gear assembly/ ⑨d Motor bracket assembly
 ⑨e Worm wheel/ ⑨f Gear holder

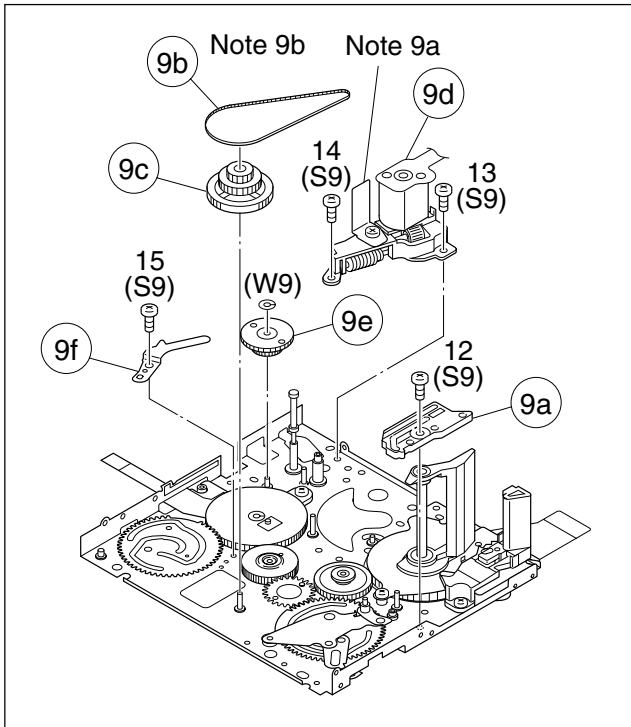


Fig. 2-4-13

Note 9a:

Carefully handle the DEW sensor. (Don't touch the sensor surface in particular.)

Note 9b:

When engaging the timing belt, make sure that it securely engages with the gears of both the center gear assembly and reel drive pulley assembly.

10. ⑩a Main cam gear/ ⑩b Brake control plate
 ⑩c Rotary encoder/ ⑩d Connect gear
 ⑩e Reel drive pulley assembly

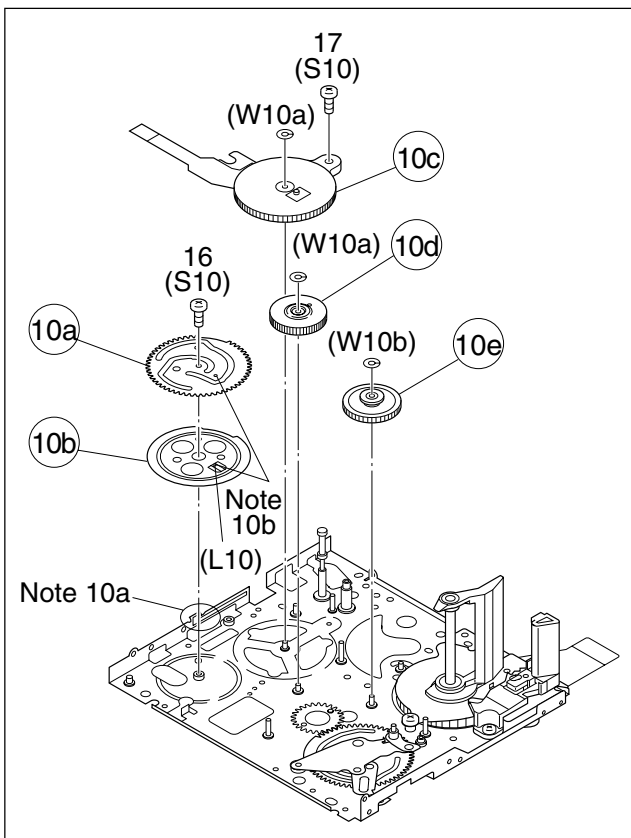


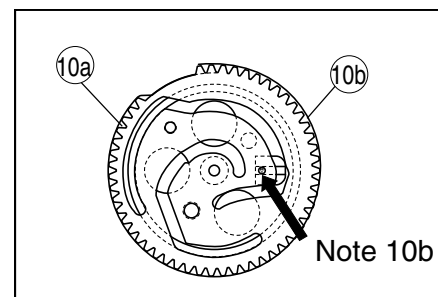
Fig. 2-4-14

Note 10a:

When removing/refitting parts, pay careful attention to the flexible board and so on not to damage them.

Note 10b:

When reinstalling the main cam gear and the brake control plate, first fit them together so that the protrusion on the brake control plate is set in the slot on the main cam gear as shown below, next install the two together to the main deck assembly.



11. ⑪a Catcher (T) assembly/ ⑪b Capstan motor
 ⑪c Charge arm assembly/ ⑪d Sub cam gear
 ⑪e PWB holder

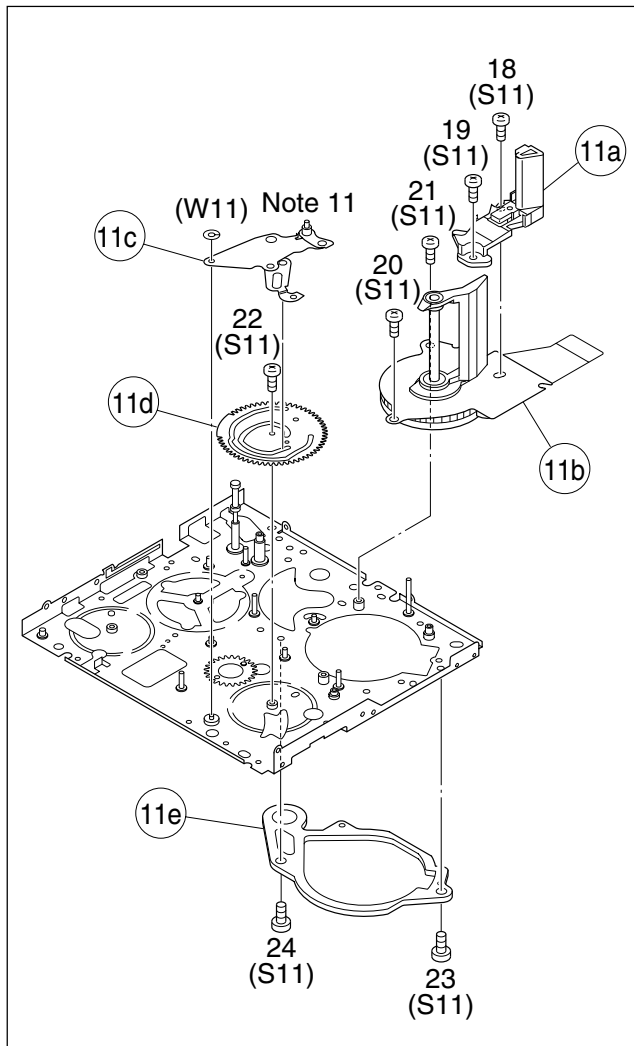
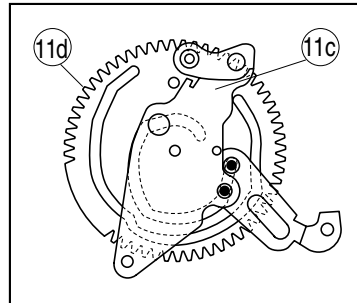


Fig. 2-4-15

Note 11:

The following figure shows how to put the charge arm assembly and sub cam gear assembly together.



2.4.3 List of procedures for disassembly

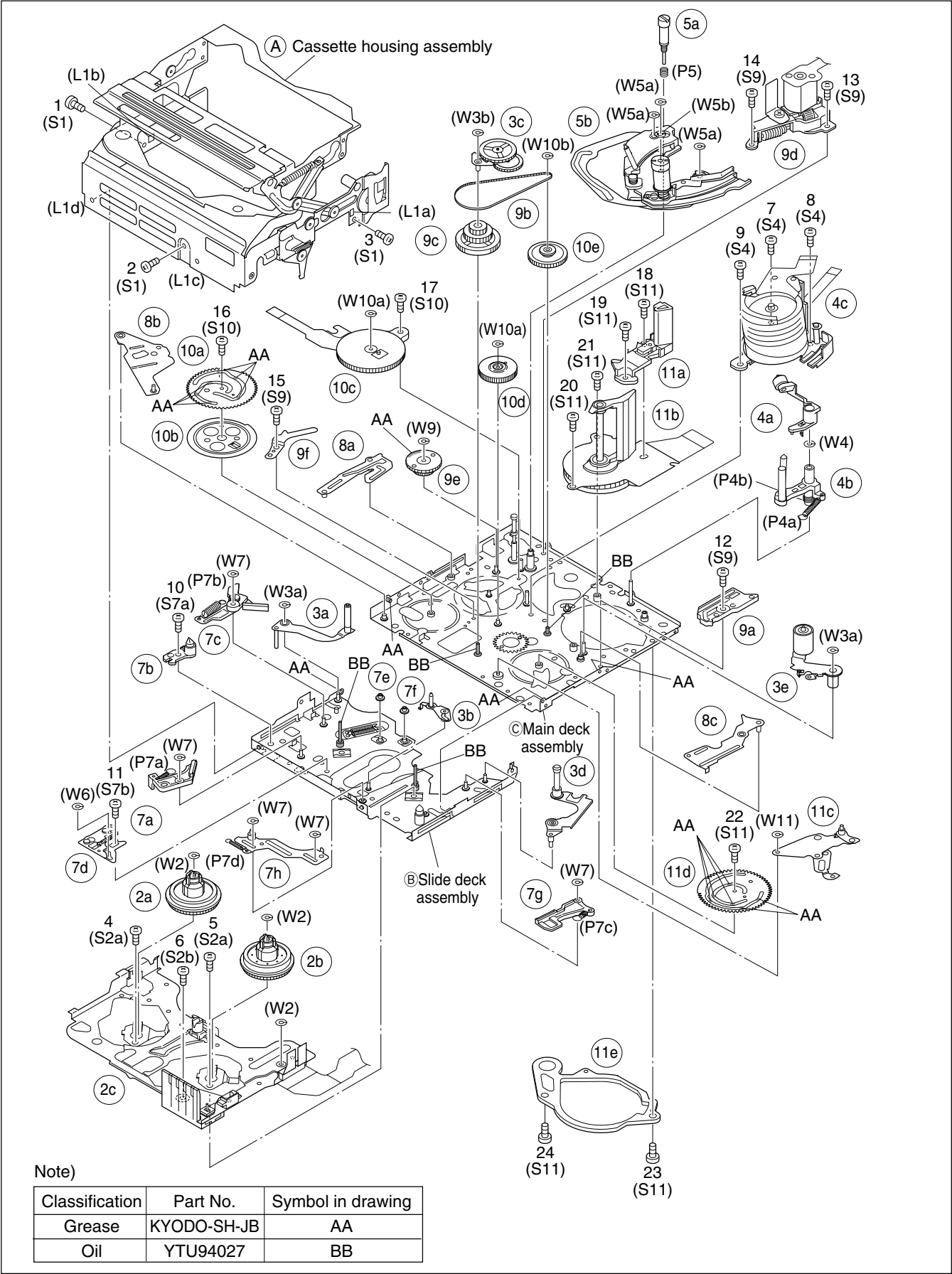
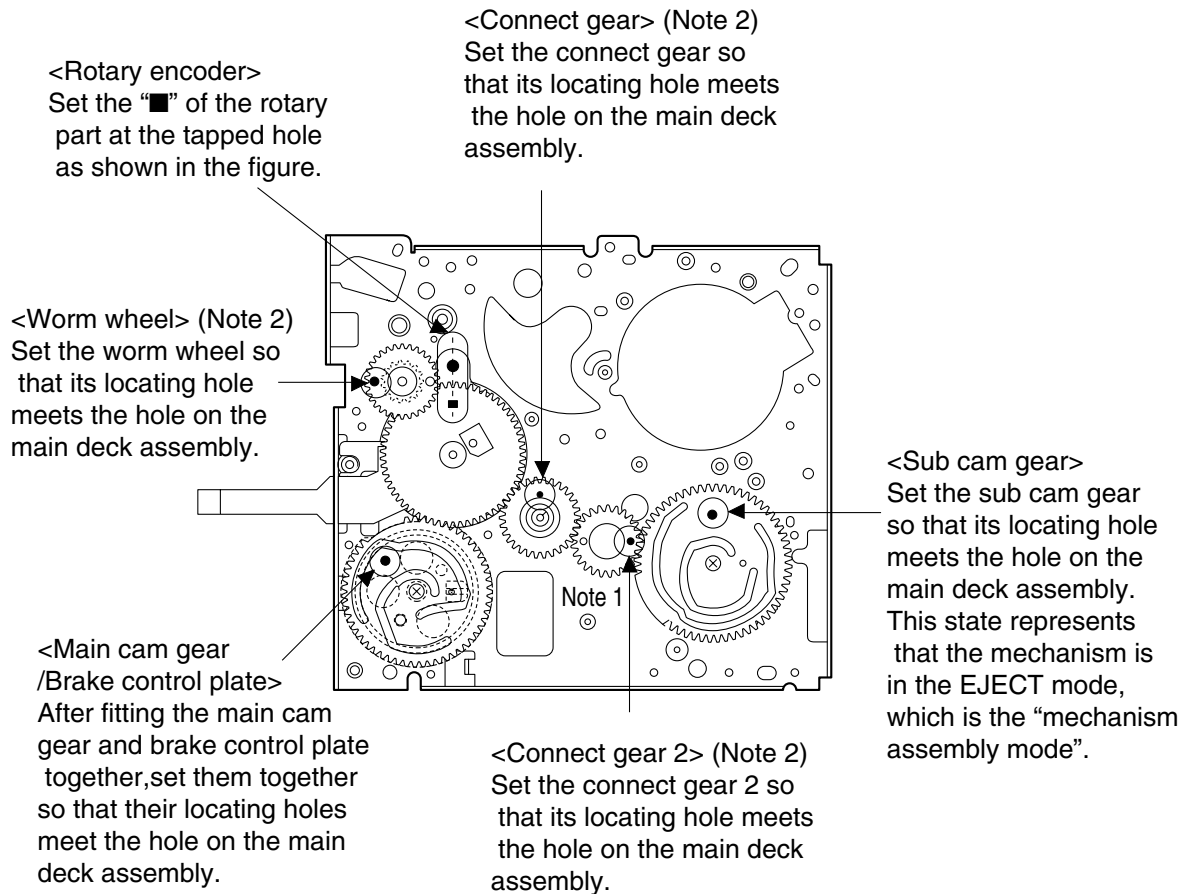


Fig. 2-4-16

2.5 CHECKUP AND ADJUSTMENT OF MECHANISM PHASE



Note 1:

Since the connect gear 2 is tightly fixed to the main deck by caulking, adjust its phase with the connect gear and sub cam gear.

Note 2:

The part that needs phase adjustment by the hole on the main deck assembly must exactly be set as the specified phase. There is a fear that some part is installed in a wrong phase because assembling of the mechanism is automated. If so, set every part in the correct phase whenever the mechanism is reassembled.

Fig. 2-5-1

2.6 MECHANISM ADJUSTMENTS

2.6.1 Assembling slide deck assembly and main deck assembly

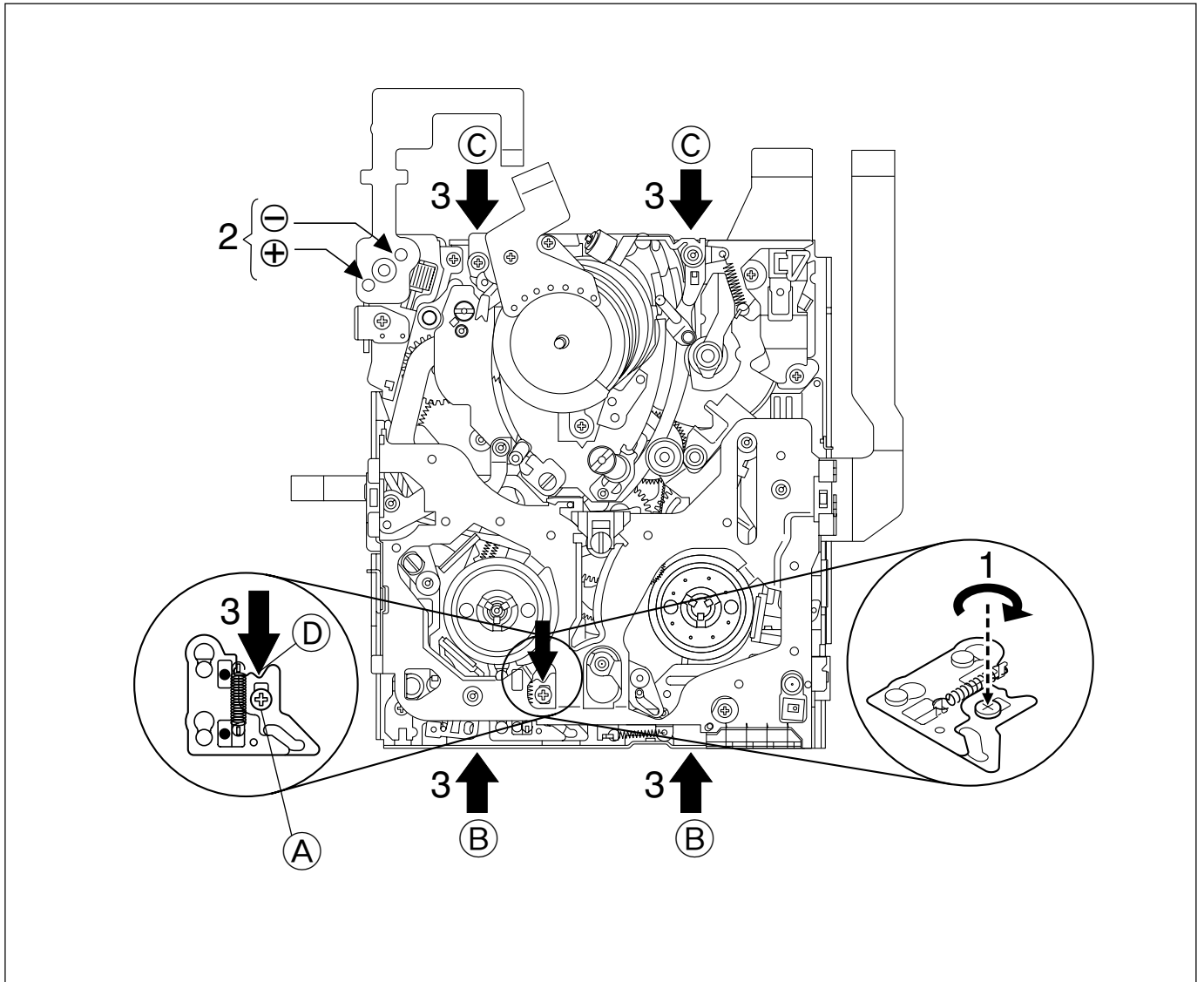


Fig. 2-6-1

Assembling procedure

1. Loosen the screw (A).
2. Set the mechanism in the PLAY mode.
(Refer to "2.3.2 Explanation of mechanism mode".)
3. Press the end face (B) of the slide deck assembly (reel disk side) and the end face (C) of the main deck assembly (drum assembly side) with uniform force so that the two assemblies are tightly pressed to each other. Furthermore, press the part (D) and tighten the screw (A).

Note : Tightening torque for screw (A): 0.069 N·m (0.7 kgf·cm)

2.6.2 Locating tension pole

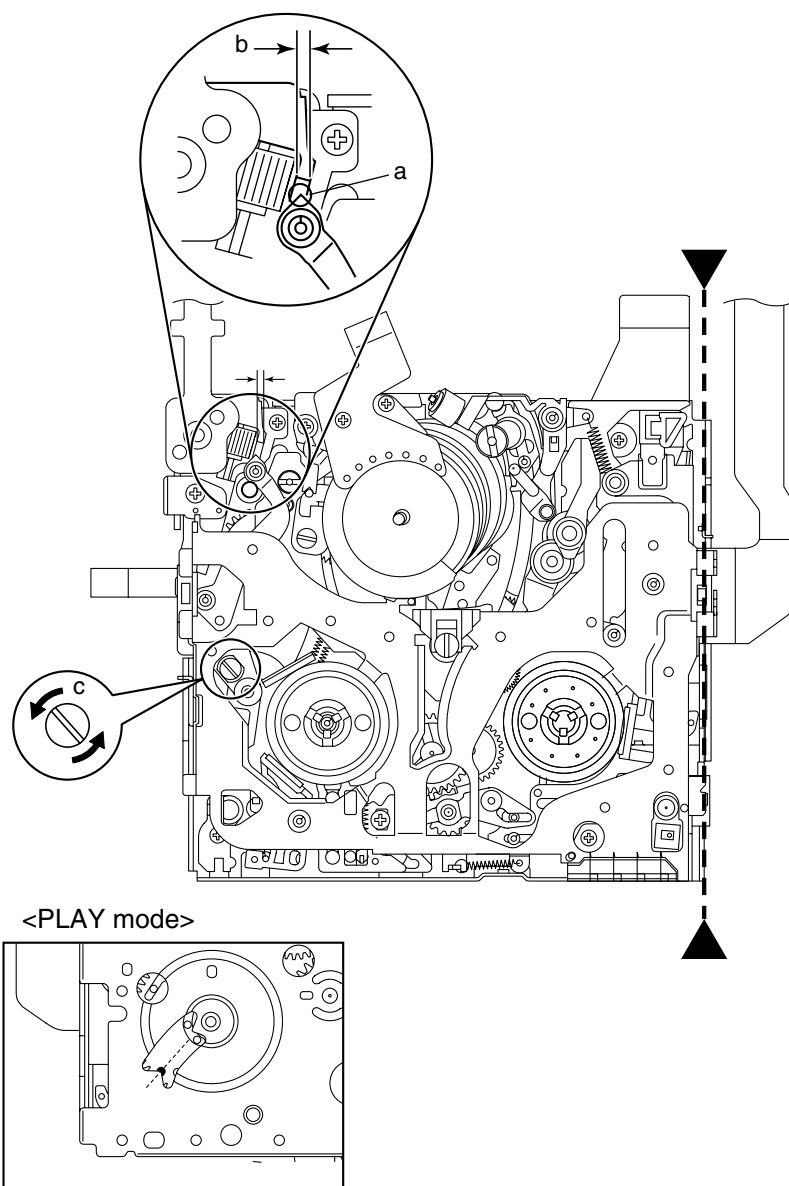


Fig. 2-6-2

Locating procedure

1. Enter the mechanism assembly into the PLAY mode.
(Refer to "2.3.2 Explanation of mechanism mode".)
2. When the "▶-----◀" part is positioned down, make sure that the part "a" of the tension arm assembly is located within the range of "b".
3. If the part "a" is out of the range, turn the pin "c" to adjust the position.

2.7 SERVICE NOTE

Use the following chart to manage mechanism parts that are removed for disassembling the mechanism.

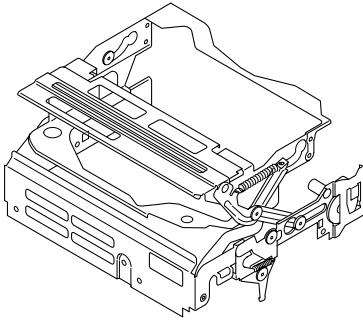
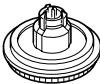
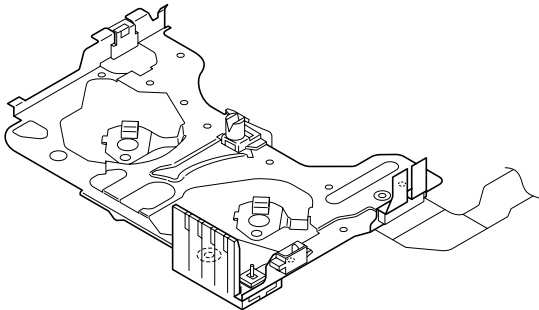
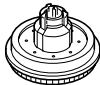
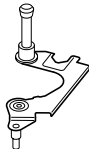
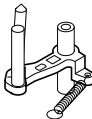
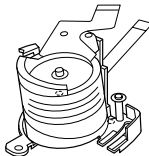
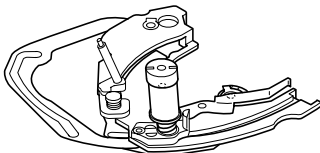
1	A Cassette housing assembly  S1×3				
2	2a Reel disk (SUP) assembly  W2×1		2c Reel cover assembly  S2a×2 S2b×1 W2×1		
	2b Reel disk (TU) assembly  W2×1				
3	3a Tension arm assembly  W3a×1	3b Release guide assembly 	3c Idler arm assembly  W3b×1	3d Guide arm assembly 	3e Pinch roller arm assembly  W3a×1
	4a Cleaner arm assembly 	4b Slant pole arm assembly  W4×1 P4a×1 P4b×1		4c Drum assembly  S4×3	
5	5a Guide roller (S) assembly  P5×1	5b Rail assembly  W5a×3 W5b×1			

Table 2-7-1a

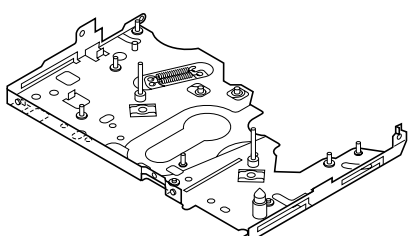
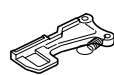
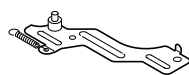
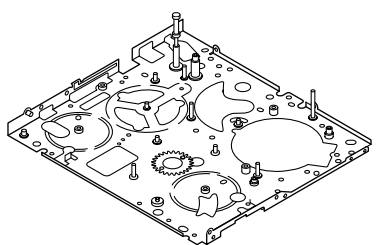
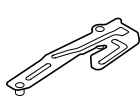
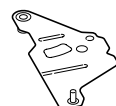
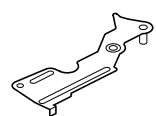
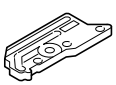
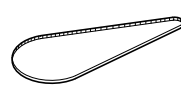
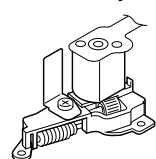
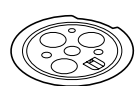
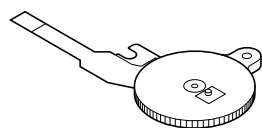
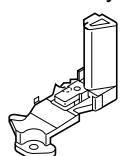
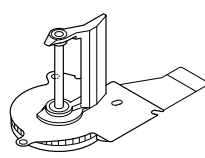
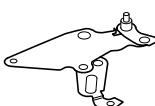
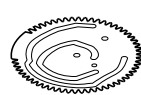
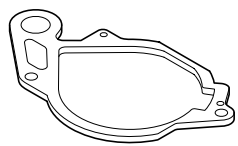
6	(B) Slide deck assembly  W6×1	7	(7a) Loading brake assembly  W7×1 P7a×1	(7b) Guide pin (S)  S7a×1	(7c) Pad arm assembly  W7×1 P7b×1	(7d) Slide guide plate assembly  S7b×1
			(7e) Collar 	(7f) Collar 	(7g) Sub brake assembly  W7×1 P7c×1	(7h) Control plate assembly  W7×2 P7d×1
8	(C) Main deck assembly 	(8a) Tension lever assembly 		(8b) Slide lever assembly 		(8c) Brake control lever assembly 
9	(9a) Loading guide  S9×1	(9b) Timing belt 	(9c) Center gear assembly 	(9d) Motor bracket assembly  S9×2	(9e) Worm wheel  W9×1	(9f) Gear holder  S9×1
	(10a) Main cam gear  S10×1	(10b) Brake control plate 	(10c) Rotary encoder  S10×1 W10a×1	(10d) Connect gear  W10a×1	(10e) Reel drive pulley assembly  W10b×1	
11	(11a) Catcher (T) assembly  S11×2	(11b) Capstan motor  S11×2	(11c) Charge arm assembly  W11×1	(11d) Sub cam gear  S11×1	(11e) PWB holder  S11×2	

Table 2-7-1b

2.8 COMPATIBILITY ADJUSTMENT

2.8.1 Jig connector cable connection

Remove one screw (1) first and the cover (JIG) next.

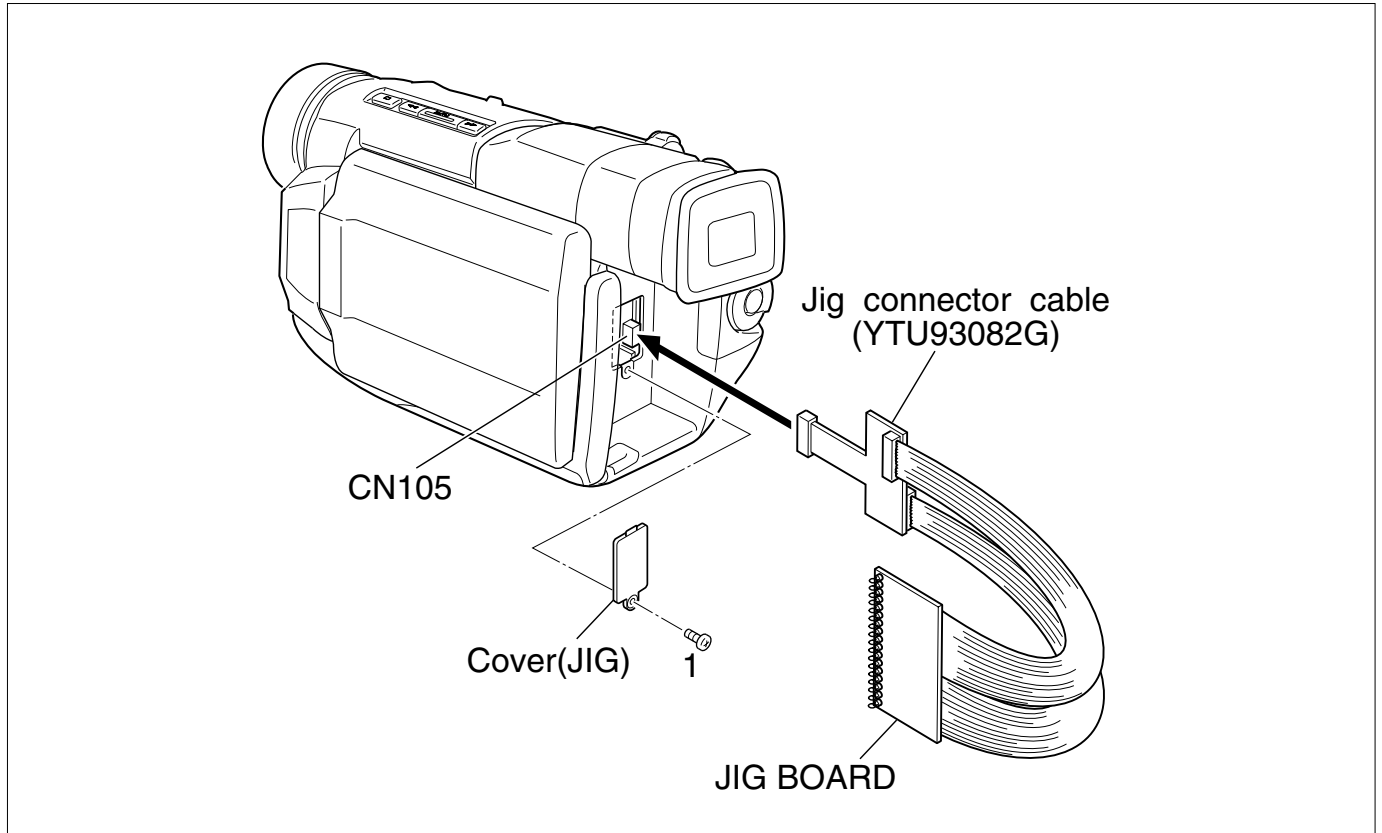


Fig. 2-8-1 Jig connector cable connection

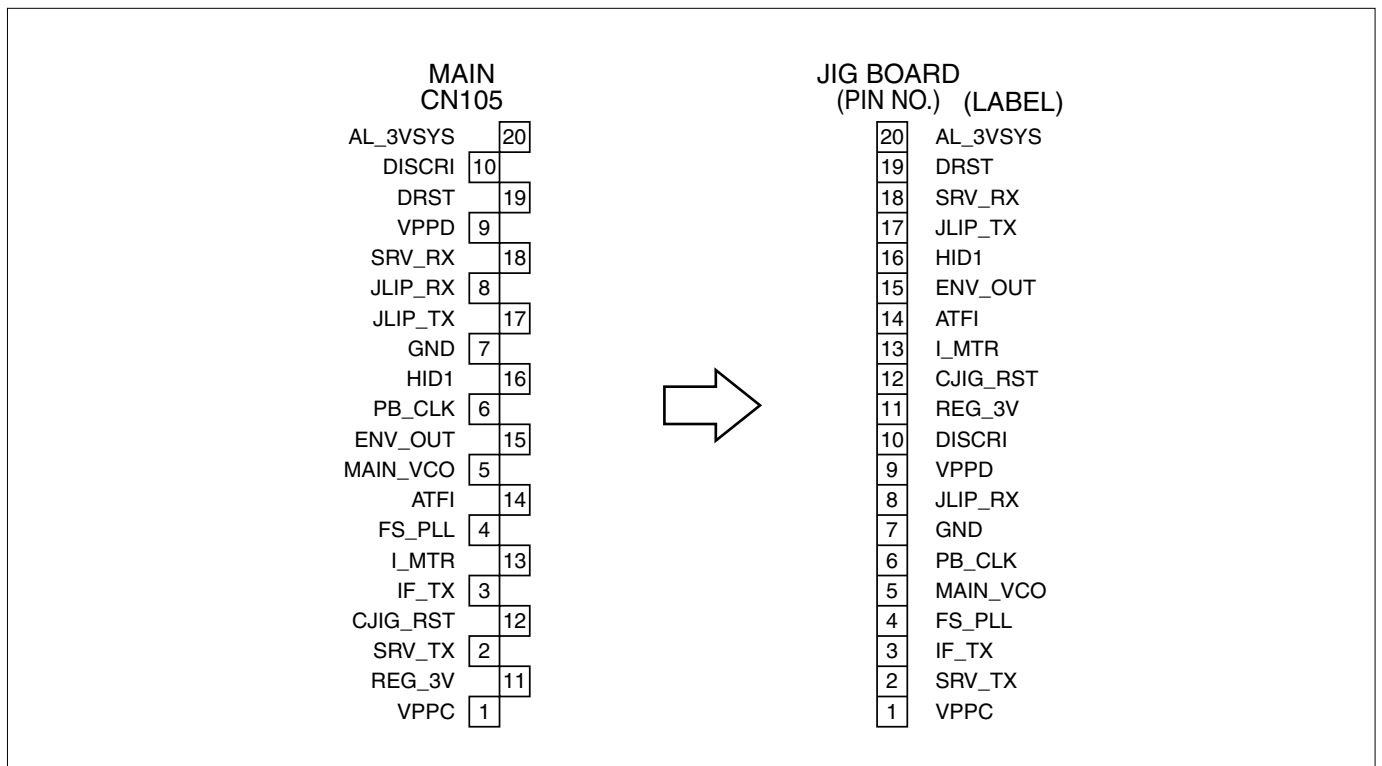


Fig. 2-8-2 Jig connector cable schematic diagram

2.8.2 Tape pattern check

- (1) Play back the compatibility adjustment tape.
- (2) While triggering the MAIN CN105-16PIN (HID1), observe the waveform of CN105-15PIN (ENV_OUT).
- (3) Confirm that the waveform is free from remarkable level-down, and entirely parallel and straight. Moreover, perform the following adjustment as required.
- (4) In case any level-down is observed on the left hand side, straighten the level by turning the guide roller of the pole base assembly (supply).
In case any level-down is observed on the right hand side, however, straighten the level by turning the guide roller of the pole base assembly (Take-up).
- (5) After adjustment, try the unloading motion once, and confirm that the waveform is flat (straight) when the tape has been played back again. Moreover, perform readjustment as required.
- (6) When the recording has been played back again, play back the self-recording to confirm that the waveform is flat.

Note:

When an adjustment is performed with the lower case cover attached, first slide the plate open and then perform the compatibility adjustment.

Be sure not to damage the cover plate when sliding it open to make an adjustment because it must be re-positioned after completing the adjustment.

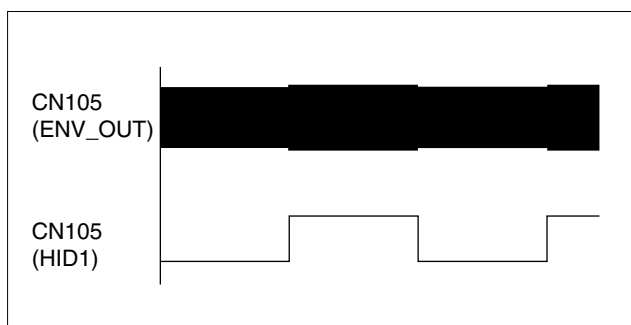


Fig. 2-8-3

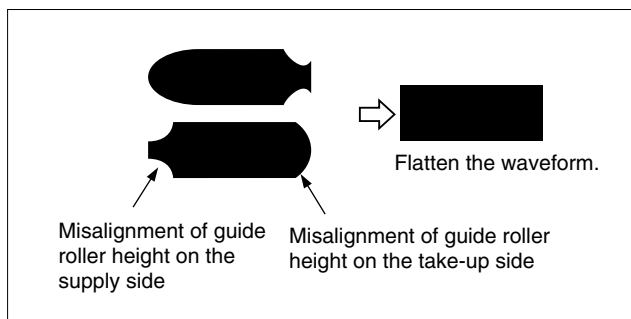


Fig. 2-8-4

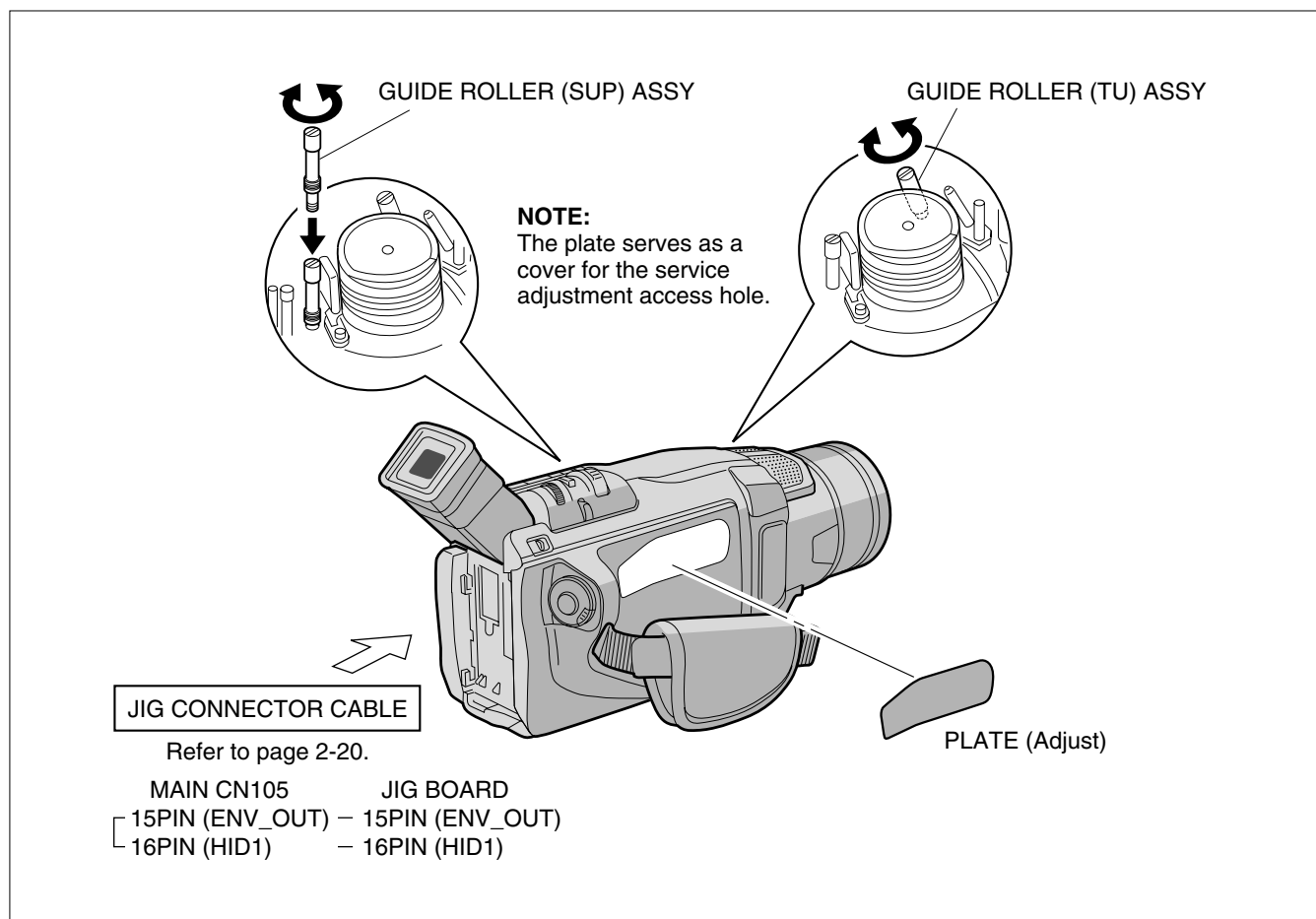


Fig. 2-8-5

SECTION 3 ELECTRICAL ADJUSTMENT

3.1 PRECAUTION

1. Precaution

Both the camera and deck sections of this model needs a personal computer for adjustment except simple adjustment with potentiometers. If some of the following parts is replaced for repair or other reason, the repaired set must be adjusted with a personal computer.

- OP block
- E²PROM (IC1003 of MAIN board)

In the event of malfunction with electrical circuits, troubleshooting with the aid of proper test instruments must be done first, and then commence necessary repair, replacement and adjustment, etc.

1. In case of wiring to chip test points for measurement, use IC clips, etc. to avoid any stress.
2. Since connectors are fragile, carefully handle them in disconnecting and connecting.
3. Shortcircuit between operation and DECK chassis.

2. Required test equipment

1. Color TV monitor.
2. AC adapter
3. Oscilloscope (dual-trace type, observable 100 MHz or higher frequency)

Note : *It is recommended to use one observable 300 MHz or higher frequency.*

4. Digital voltmeter
5. Frequency counter (with threshold level adjuster)
6. Personal computer

3. Tools required for adjustments

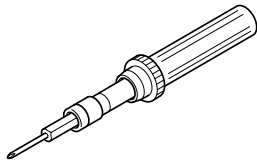
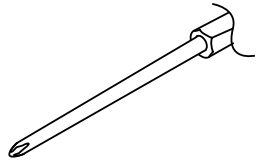
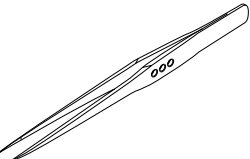
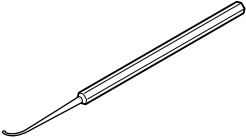
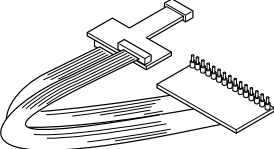
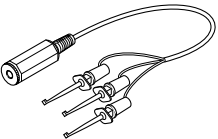
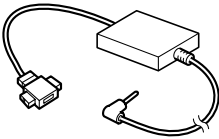
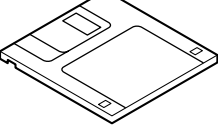
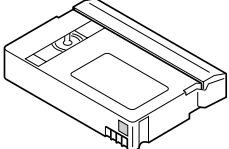
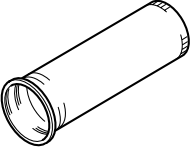
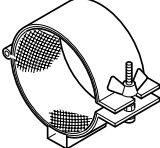
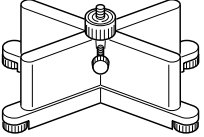
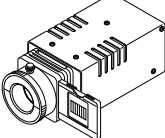
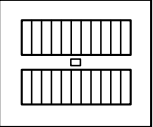
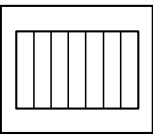
1	Torque driver YTU94088	2	Bit YTU94088-003
			
3	Tweezers P-895	4	Chip IC replacement jig PTS40844-2
			
5	Jig connector cable YTU93082G	6	Communication cable YTU93107A
			
7	PC cable QAM0099-002	8	Service support system YTU94057-60
			
9	Alignment tape MC-2	10	INF adjustment lens YTU92001B
			
11	INF adjustment lens holder YTU94087	12	Camera stand YTU93079
			
13	Light box assembly YTU93096A	14	Gray scale chart YTU94133A
			
15	Color bar chart YTU94133C		
			

Table 3-1-1

1. Torque driver

Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.

2. Bit

This bit is slightly longer than those set in conventional torque drivers.

3. Tweezers

To be used for removing and installing parts and wires.

4. Chip IC replacement jig

To be used for adjustment of the camera system.

5. Jig connector cable

Connected to CN105 of the main board and used for electrical adjustment, etc.

6. Communication cable

Connect the Communication cable between the PC cable and Jig connector cable when performing a PC adjustment.

7. PC cable

To be used to connect the VideoMovie and a personal computer with each other when a personal computer is used for adjustment.

8. Service support system

To be used for adjustment with a personal computer.

9. Alignment tape

To be used for check and adjustment of interchangeability of the mechanism.

10. INF adjustment lens

To be used for adjustment of the camera system.

11. INF adjustment lens holder

To be used together with the camera stand for operating the VideoMovie in the stripped-down condition such as the status without the exterior parts or for using commodities that are not yet conformable to the interchangeable ring.

12. Camera stand

To be used together with the INF adjustment lens holder.

13. Light box assembly

To be used for adjustment of the camera system.

14. Gray scale chart (for Light box assembly)

To be used for adjustment of the camera system.

15. Color bar chart (for Light box assembly)

To be used for adjustment of the camera system.

3.2 SETUP

1. Setup for electrical adjustment with personal computer.

NOTE: Remove one screw (1) first and the cover (JIG) next.

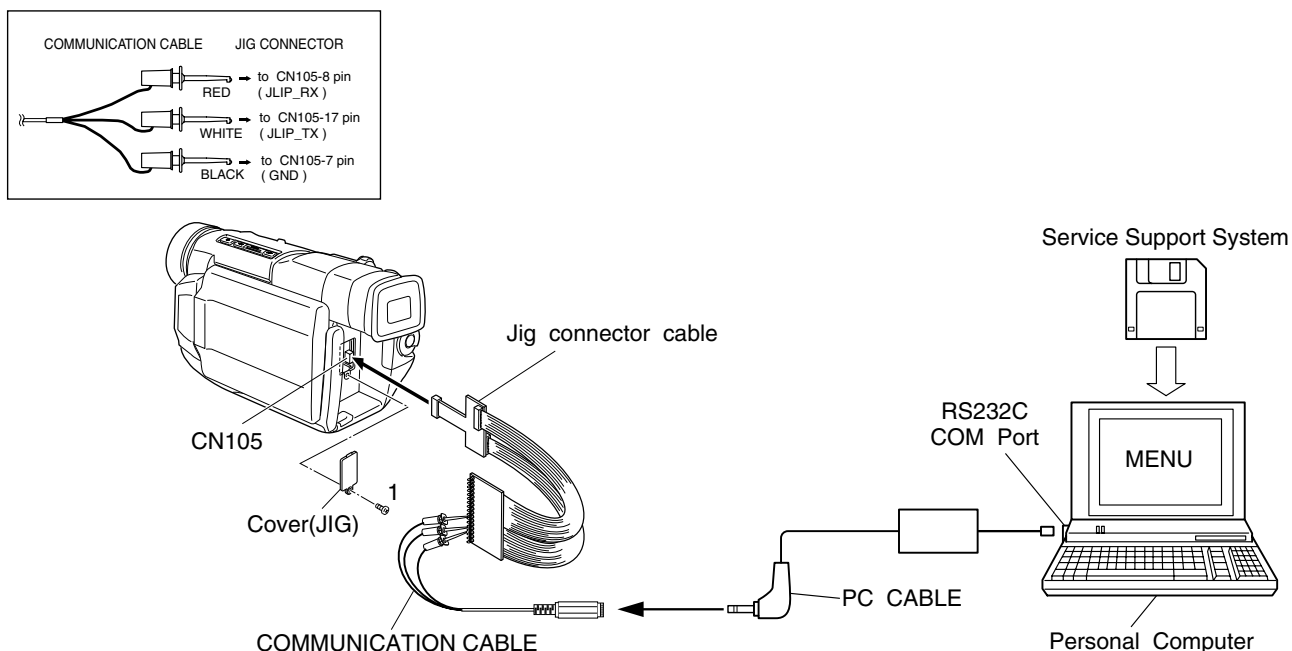


Fig. 3-2-1 Connection for Service support system

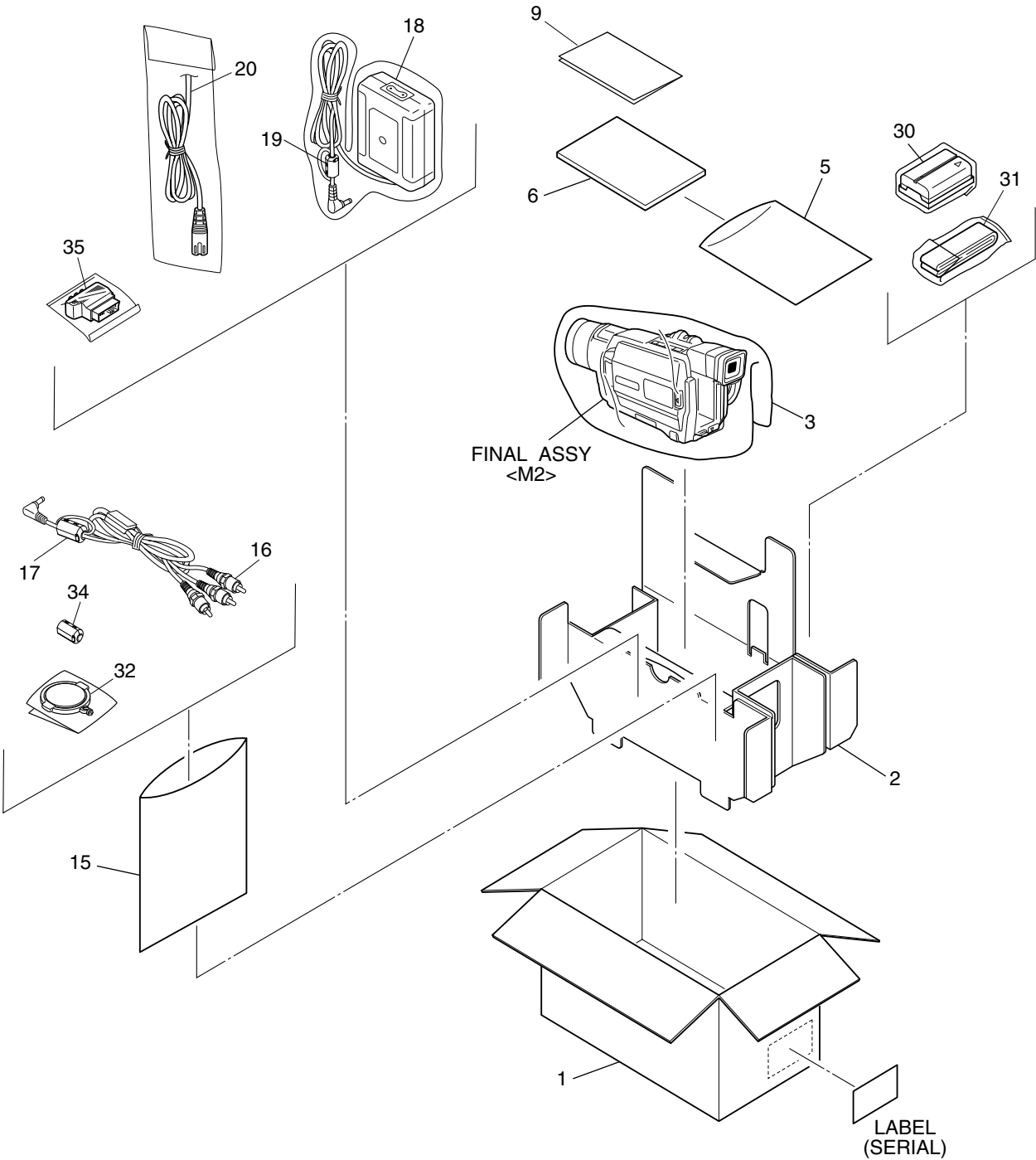
SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING AND ACCESSORY ASSEMBLY <M1>

The instruction manual to be provided with this product will differ according to the destination.



#	⚠ REF No.	PART No.	PART NAME, DESCRIPTION

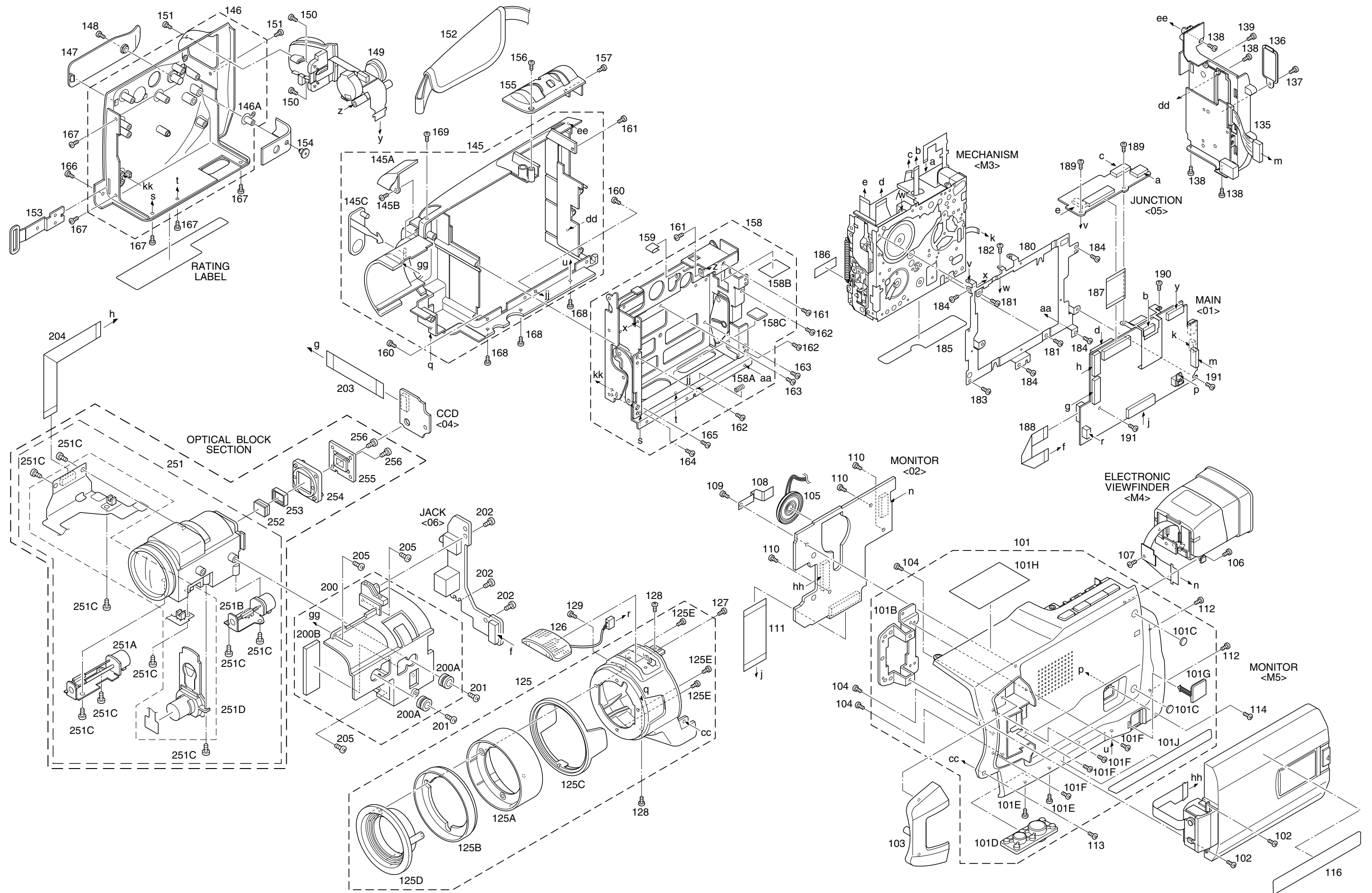
PACKING AND ACCESSORY ASSEMBLY <M1>

1	LY32746-001A	PACKING CASE
2	LY32747-001A	CUSHION
3	LY30023-015A	POLY BAG
5	QPA02003506	POLY BAG
⚠ 6	LYT1023-002A	INST.BOOK(GE),A,B
⚠	LYT1023-003A	INST.BOOK(FR),A
⚠	LYT1023-004A	INST.BOOK(DU),A
⚠	LYT1023-005A	INST.BOOK(SP),A
⚠	LYT1023-006A	INST.BOOK(IT),A
⚠	LYT1023-007A	INST.BOOK(DA),B
⚠	LYT1023-008A	INST.BOOK(FI),B
⚠	LYT1023-009A	INST.BOOK(SW),B
⚠	LYT1023-010A	INST.BOOK(NO),B
⚠	LYT1023-011A	INST.BOOK(RU),C
⚠	LYT1023-012A	INST.BOOK(CZ),C
⚠	LYT1023-013A	INST.BOOK(PO),C
⚠	LYT1023-014A	INST.BOOK(HU),C
9	BT-54013-2	WARRANTY CARD
15	QPA01703005	POLY BAG
16	QAM0212-001	CABLE ASSY,AUDIO/VIDEO CABLE
17	QQR0918-002	CORE FILTER
⚠ 18	LY20847-001C	AC ADAPTER,AP-V12EG
19	QQR0917-002	CORE FILTER
⚠ 20	QMPL120-190-JR	POWER CORD
⚠ 30	LY32566-001A	BATTERY PACK,BN-V408U
31	LY20186-001A	SHOULDER STRAP
32	LY43606-001A	LENS CAP ASSY
34	QQR0491-002	CORE FILTER
35	QAM0302-001	ADAPTOR PLUG

MODEL	MARK
GR-DVL145EG-X	A
GR-DVL145EG-Y	B
GR-DVL145EG-Z	C

- INSTRUCTIONS
- GE GERMANY
 - FR FRENCH
 - DU DUTCH
 - SP SPANISH
 - IT ITALIAN
 - DA DANISH
 - FI FINNISH
 - SW SWEDISH
 - NO NORWEGIAN
 - RU RUSSIAN
 - CZ CZECH
 - PO POLISH
 - HU HUNGARIAN

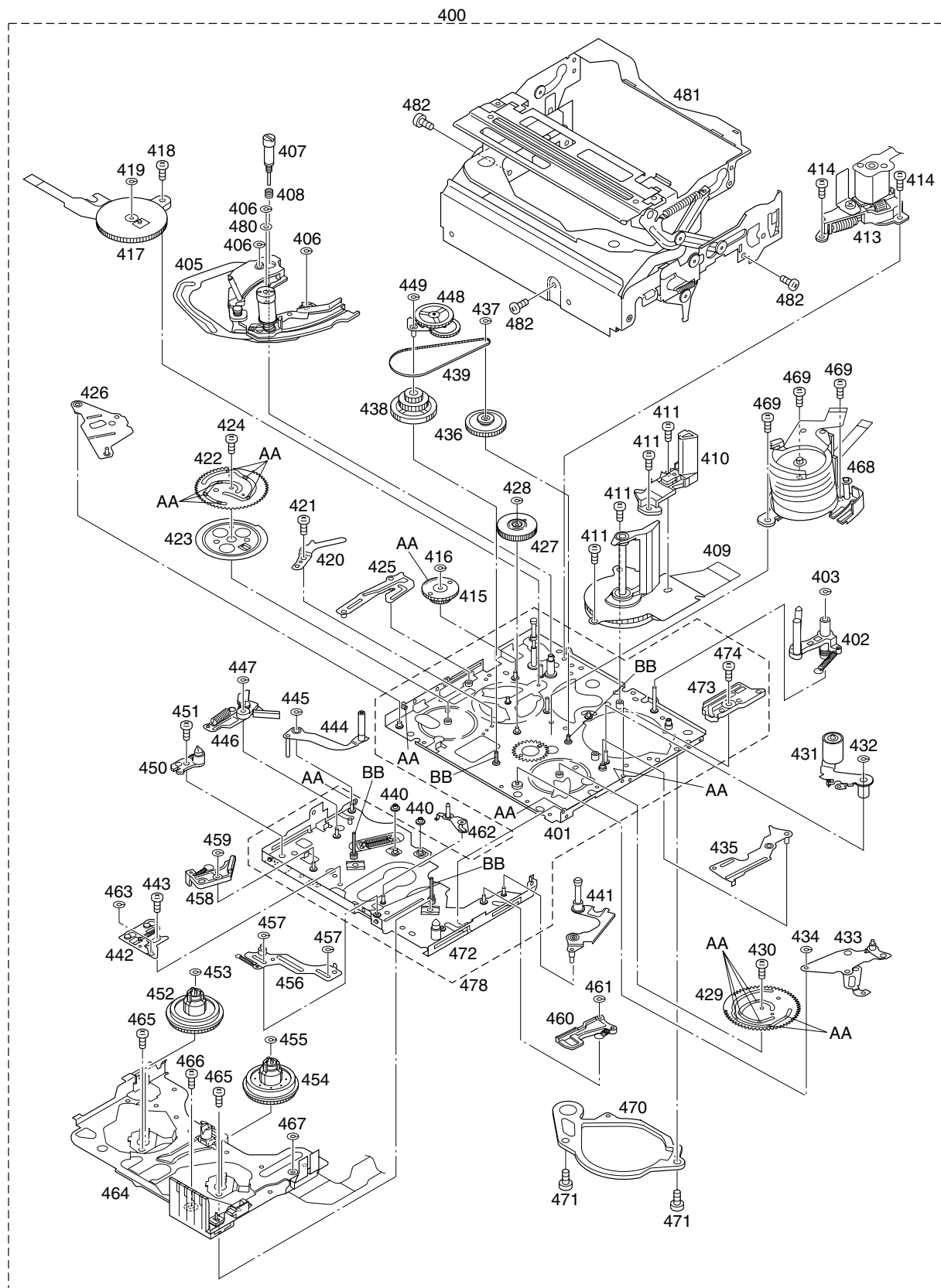
5.2 FINAL ASSEMBLY <M2>



#	△	REF No.	PART No.	PART NAME, DESCRIPTION	#	△	REF No.	PART No.	PART NAME, DESCRIPTION
*****					158C			LY30029-0E9A	SPACER(A)
					159			LY30030-013A	SPACER(A)
					160			LY30018-038A	SPECIAL SCREW,X2
					161			LY30018-084A	SPECIAL SCREW,X3
					162			LY30018-087A	SPECIAL SCREW,X3
					163			LY30018-087A	SPECIAL SCREW,X2
					164			LY30018-087A	SPECIAL SCREW
					165			LY30018-087A	SPECIAL SCREW
					166			LY30018-038A	SPECIAL SCREW
					167			LY30018-038A	SPECIAL SCREW,X5
					168			LY30018-084A	SPECIAL SCREW,X3
					169			LY30018-092A	SPECIAL SCREW
					180			LY20696-001A	BRACKET(MECHA)
					181			LY30019-026A	SPECIAL SCREW,X2
					182			YQ43893-4	MINI SCREW
					183			LY30018-084A	SPECIAL SCREW
					184			LY30018-066A	SPECIAL SCREW,X4
					185			LY40698-002A	LABEL(HOUSING)
					186			LY40699-002A	LABEL(PUSH)
					187			WJT0044-001A	E-CARD WIRE,MAIN CN113-JUNK.CN571
					188			WJT0077-001A	E-CARD WIRE,MAIN CN103-JACK CN502
					189			QYSPSPT1730Z	SCREW,X2
					190			YQ43893-4	MINI SCREW
					191			LY30019-033A	SPECIAL SCREW,X2
					200			LY32751-001A	FRAME(OP)ASSY
					200A			LY41082-001A	CUSHION(OP),X2
					200B			LY30029-0A4A	SPACER(A)
					201			LY30018-050A	SPECIAL SCREW,X2
					202			LY30018-084A	SPECIAL SCREW,X3
					203			WJT0075-001A	E-CARD WIRE,CCD CN5001-MAIN CN107
					204			WJT0076-001A	E-CARD WIRE,OP-MAIN CN108
					205			LY30018-084A	SPECIAL SCREW,X3
					- OPTICAL BLOCK SECTION -				
					251			LY30948-004A	OP BLOCK ASSY
					251A			PTY30948-301	ZOOM MOTOR
					251B			PTY30948-002	FOCUS MOTOR
					251C			PTY30151-016	TAPPING SCREW,X9
					251D			PTY30948-006	IRIS MOTOR
					252			LY42936-001A	OPTICAL LPF
					253			LY31370-001B	SPACER RUBBER
					254			LY20497-001A	CCD SPACER
					255			LYH30406-002A	CCD BASE ASSY
					256			QYSPSGU2080Z	SCREW,X2

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.



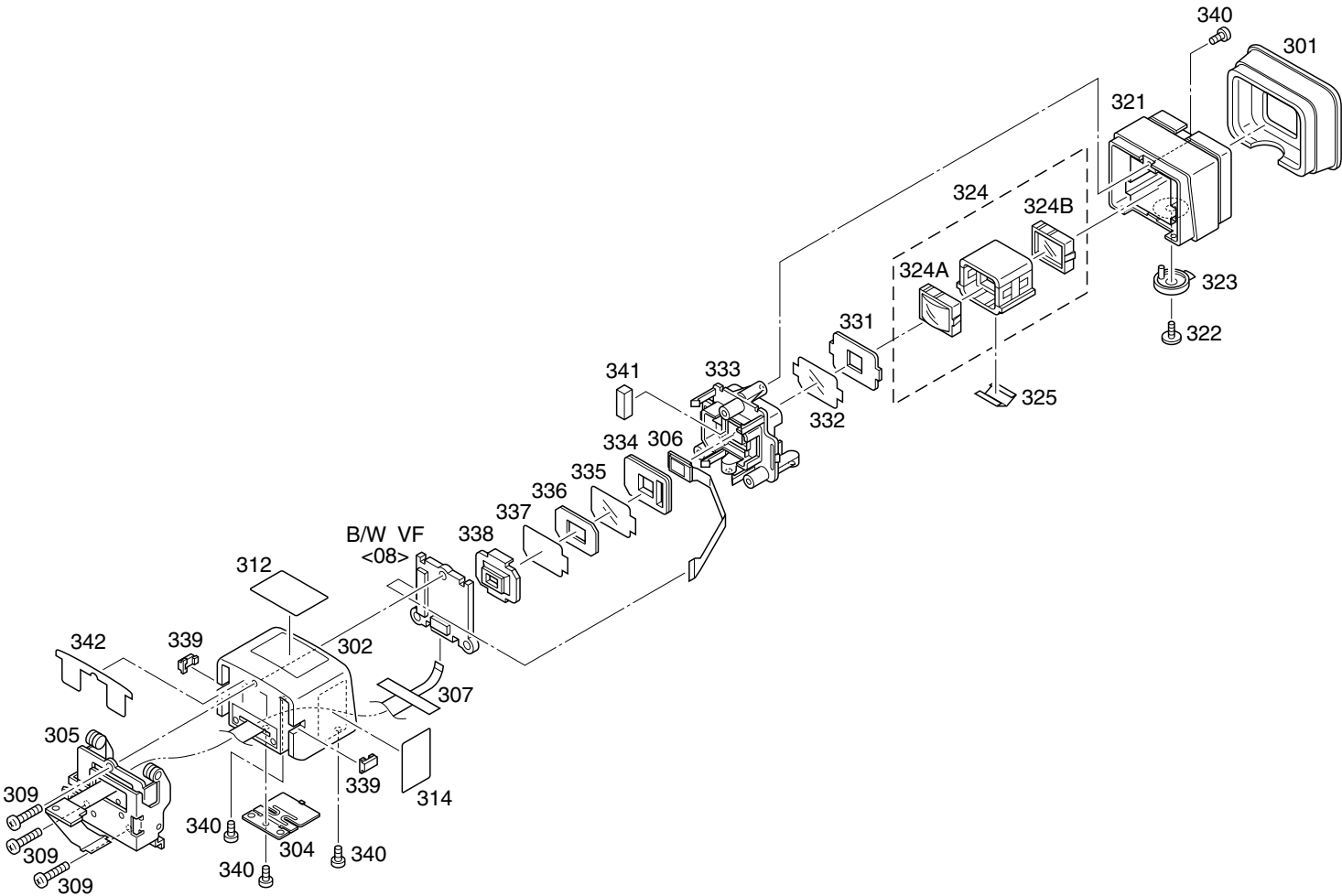
Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	YTU94027	BB

NOTE: The section marked in **AA** and **BB** indicate lubrication and greasing areas.

#	△	REF No.	PART No.	PART NAME, DESCRIPTION	#	△	REF No.	PART No.	PART NAME, DESCRIPTION

MECHANISM ASSEMBLY <M3>									
400			YMA0025WCC/E	MECHA(A)ASSY	461			YQ44246	SLIT WASHER
401			LY10240-001D	MAIN DECK ASSY	462			LY31863-001B	RELEASE GUIDE ASSY
402			LY30436-001J	SLANT POLE ARM ASSY	463			YQ44246	SLIT WASHER
403			YQ44246	SLIT WASHER	464			LY20146-001H	REEL COVER ASSY
405			LY10080-001V	RAIL ASSY	465			YQ43893-4	MINI SCREW,X2
406			YQ44246	SLIT WASHER,X3	466			YQ43893	MINI SCREW
407			LY40353-001D	GUIDE ROLLER(S)ASSY	467			YQ44246	SLIT WASHER
408			LY30002-006C	COMPRESSION SPRING	468			YDV2086S(CX)	DRUM ASSY
409			QAR0026-002	CAPSTAN MOTOR	469			YQ43893	MINI SCREW,X3
410			LY30504-001C	CATCHER(T)ASSY	470			LY20630-001A	PWB HOLDER
411			YQ43893	MINI SCREW,X4	471			YQ43893	MINI SCREW,X2
413			LY30448-001E	MOTOR BRACKET ASSY	472			LY10242-001A	SLIDE DECK ASSY
414			YQ43893	MINI SCREW,X2	473			LY31833-001A	LOADING GUIDE
415			LY31840-001A	WORM WHEEL	474			YQ43893	MINI SCREW
416			YQ44246	SLIT WASHER	478			LY31832-001D	DECK ASSY
417			LY40496-001C	ROTARY ENCODER	480			LY41573-001A	WASHER
418			YQ43893	MINI SCREW	481			LY31867-001B	CASSETTE HOUSING ASSY
419			YQ44246	SLIT WASHER	482			YQ43893-4	MINI SCREW,X3
420			LY42632-001A	GEAR HOLDER					
421			YQ43893-6	MINI SCREW					
422			LY31841-001A	MAIN CAM					
423			LY31842-001A	BRAKE CONTROL PLATE					
424			YQ43893	MINI SCREW					
425			LY42633-001A	TAKE UP CONTROL LEVER ASSY					
426			LY31844-001A	SLIDE LEVER ASSY					
427			LY31846-001A	CONNECT GEAR					
428			YQ44246	SLIT WASHER					
429			LY31847-001A	SUB CAM					
430			YQ43893	MINI SCREW					
431			LY31785-001A	PINCHI ROLLER ARM UNIT					
432			YQ44246	SLIT WASHER					
433			LY31850-001A	CHARGE ARM ASSY					
434			YQ44246	SLIT WASHER					
435			LY42643-001A	BRAKE CONTROL LEVER ASSY					
436			LY42645-001A	REEL DRIVE PULLEY ASSY					
437			YQ44246-2	SLIT WASHER					
438			LY40391-002B	CENTER GEAR ASSY					
439			LY40396-001A	TIMING BELT					
440			LY40413-001A	COLLAR,X2					
441			LY31854-001A	GUIDE ARM ASSY					
442			LY31786-001A	SLIDE GUIDE PLATE UNIT					
443			YQ43893-2	MINI SCREW					
444			LY42651-001B	TENSION ARM ASSY					
445			YQ44246	SLIT WASHER					
446			LY30471-001D	PAD ARM ASSY					
447			YQ44246	SLIT WASHER					
448			LY42745-001A	IDLER ARM ASSY					
449			YQ44246-2	SLIT WASHER					
450			LY31861-001A	GUIDE PIN(SUPPLY)					
451			YQ43893	MINI SCREW					
452			LY40441-001B	REEL DISK(SUPPLY)ASSY					
453			YQ44246	SLIT WASHER					
454			LY40443-002A	REEL DISK(TAKE UP)ASSY					
455			YQ44246	SLIT WASHER					
456			LY31788-001A	CONTROL PLATE UNIT					
457			YQ44246	SLIT WASHER,X2					
458			LY40444-001E	LOADING BRAKE ASSY					
459			YQ44246	SLIT WASHER					
460			LY40452-001C	SUB BRAKE ASSY					

5.4 ELECTRONIC VIEWFINDER ASSEMBLY <M4>



REF No. PART No. PART NAME, DESCRIPTION

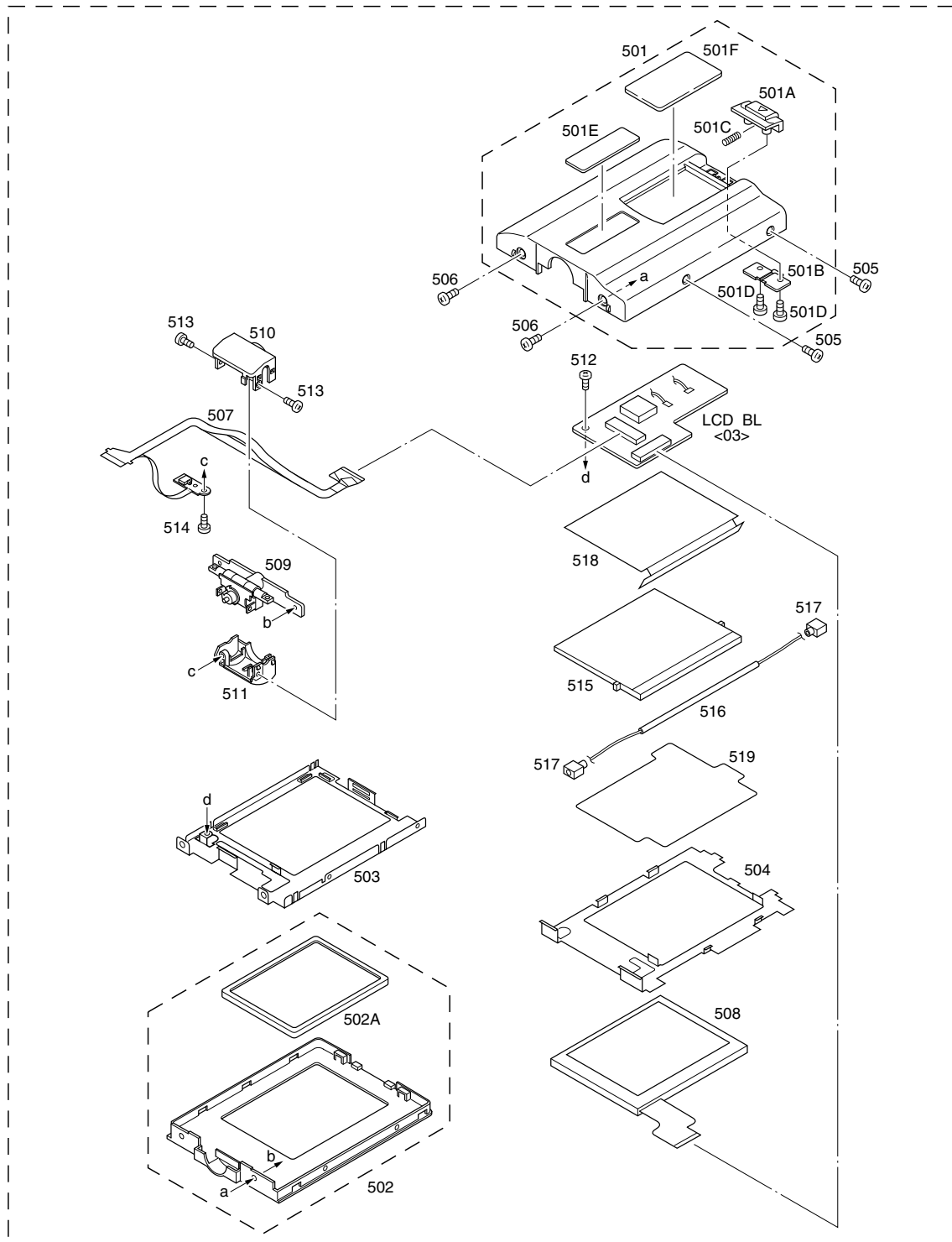
ELECTRONIC VIEWFINDER ASSEMBLY <M4>

301	LY32349-001A	EYE CUP
302	LY20766-001A	CASE A(VF)
304	LY32351-001A	CAP(VF)
305	LY20768-001A	VF HINGE ASSY
306	QLD0193-001	LCD MODULE
307	QAL0380-002	FPC
309	LY30018-0F1A	SPECIAL SCREW,X3
312	LY41701-002A	SHEET(CAUTION)1
314	LY43041-002A	LABEL(VF)
321	LY20767-001A	CASE B(VF)
322	LY30019-037A	SPECIAL SCREW
323	LY43231-001A	LEVER(VF)

#	REF No.	PART No.	PART NAME, DESCRIPTION
	324	LY32472-001A	LENS ASSY
	324A	LY43356-001A	LENS(A)
	324B	LY43357-001A	LENS(B)
	325	LY43404-001A	SPRING(VF)
	331	LY43236-001A	SHEET
	332	LY43246-001A	SHEET2(POLA)
	333	LY32347-001A	HOLDER LCD(VF)
	334	LY43245-001A	SHEET(CUSION)
	335	LY43234-001A	SHEET1(POLA)
	336	LY43232-001A	SHEET(VF)
	337	LY43235-001A	SHEET(DIFF)
	338	LY43238-001A	HOLDER(LED)
	339	LY43239-001A	GUIDE(VF),X2
	340	LY30018-060A	SPECIAL SCREW,X4
	341	LY30029-0U6A	SPACER(A)
	342	LY43489-001B	PLATE(VF)

5.5 MONITOR ASSEMBLY <M5>

500



△ REF No. PART No. PART NAME, DESCRIPTION

MONITOR ASSEMBLY <M5>

500	LYH20246-045B	MONITOR ASSY
501	LY20702-008A	MONITOR COVER(2.5)ASSY
501A	LY31620-001A	KNOB(LOCK 1)
501B	LY42180-001A	KNOB(LOCK 2)
501C	LY30002-044A	COMPRESSION SPRING
501D	LY30018-084A	SPECIAL SCREW,X2
501E	LY42883-001B	MARK
501F	LY32087-006A	WINDOW
502	LY32924-001A	MONITOR CASE(2.5)ASSY
502A	LY43805-001A	SPACER(MONI.)
503	LY32748-001B	BRACKET(FRM1)
504	LY32749-001B	BRACKET(FRM2)

△ REF No. PART No. PART NAME, DESCRIPTION

505	QYSPSPT1730R	SCREW,X2
506	LY30018-0F2A	SPECIAL SCREW,X2
507	LY32574-001A	MONITOR FPC ASSY
508	QLD0234-001	LCD MODULE
509	LY32079-001A	HINGE ASSY
510	LY32088-001A	HINGE COVER(1)
511	LY32089-001B	HINGE COVER(2)
512	QYSPSPT1730R	SCREW
513	LY30018-058A	SPECIAL SCREW,X2
514	LY30018-023A	SPECIAL SCREW
515	LY43392-001A	LIGHT SCREEN
516	QLL0125-001	LAMP
517	LY43778-001A	HOLDER,X2
518	LY43396-001A	SHEET(REFLECT)
519	LY43362-001A	DIFFUSION SHEET(2.5),A
	LY43901-001A	DIFFUSION SHEET(2.5),B,C

5.6 ELECTRICAL PARTS LIST

△ REF No. PART No. PART NAME, DESCRIPTION

MAIN BOARD ASSEMBLY <01>

PW	YB10368B-01	MAIN BOARD ASSY
IC1001	UPD703039F1-A32	IC(MICRO C ROM)
	or UPD70F3040F1A32	IC(MICRO C ROM)
IC1002	RS5C314	IC
IC1003	X25170S8I-2.5-X	IC
	or 25LC160-I/SN-X	IC
	or AT25160N-10SC-X	IC
	or CAT25C16SI	IC
IC1004	TC75S56FU	IC
IC1005	TC7S00FU	IC
	or SN74AHC1G00K	IC
IC1006	MB90097PFV145	IC(MICRO C ROM)
IC1007	SN74AHC1G08K	IC
IC1008	IC-PST3423U-X	IC
IC1009	TC7W08FU	IC(DIGITAL)
IC1401	UPD703040YF-M12	IC(MICRO C ROM)
	or UPD70F3040YFM12	IC(MICRO C ROM)
△ IC1601	BD6631KV	IC
IC1602	TC7W14FU	IC(DIGITAL)
	or SN74AHC2G14T	IC
IC2001	AK4560AVQ	IC
IC3001	JCY0152	IC
IC3005	JCY0136	IC
IC3501	JCY0132	IC
IC3502	SN74AHC1G04K	IC
IC3701	BA7665FS	IC
IC4201	HD49334F	IC
	or HD49334AF	IC
IC4202	MM1385HN	IC
IC4301	JCY0158	IC
IC4302	MSM548331TA	IC(DIGITAL)
IC4305	TC7W53FU	IC(DIGITAL)
IC4601	BA10358F-XE	IC
IC4602	BA10324AF-XE	IC
IC4901	UPD16835AGS	IC
IC5501	JCY0117	IC
IC6001	S-80842CNNB-W	IC
IC6101	FA3698F	IC
Q1001	DTC124EE	DIGI TRANSISTOR
	or UN9212J	DIGI TRANSISTOR
Q1002	2SC4617/QR/-X	TRANSISTOR
	or 2SD2216J/QR/-X	TRANSISTOR
Q1004	DTC143XE	DIGI TRANSISTOR
Q1005	2SJ347	MOS FET
Q1008	DTA114EE	DIGI TRANSISTOR
	or PDTA114EE	DIGI TRANSISTOR
	or RN2102	DIGI TRANSISTOR
	or UN9111J	DIGI TRANSISTOR
Q1009	DTC144EE	DIGI TRANSISTOR
	or PDTC144EE	DIGI TRANSISTOR
	or RN1104	DIGI TRANSISTOR
	or UN9213J	DIGI TRANSISTOR
Q1010	UMX1N	PAIR TRANSISTOR
Q1011	UMX1N	PAIR TRANSISTOR
Q1012	UMX1N	PAIR TRANSISTOR
Q1013	UMX1N	PAIR TRANSISTOR
Q1401	DTA114EE	DIGI TRANSISTOR
	or PDTA114EE	DIGI TRANSISTOR
	or RN2102	DIGI TRANSISTOR

△ REF No. PART No. PART NAME, DESCRIPTION

	or UN9111J	DIGI TRANSISTOR
Q1402	UMC3N	DIGI TRANSISTOR
Q1403	UMC3N	DIGI TRANSISTOR
Q1601	UMC3N	DIGI TRANSISTOR
Q2001	UMX1N	PAIR TRANSISTOR
Q2002	2SC4617/RS/-X	TRANSISTOR
Q2004	2SC4617/RS/-X	TRANSISTOR
Q3001	2SC4617/RS/-X	TRANSISTOR
Q3002	2SC4617/RS/-X	TRANSISTOR
Q3701	UMT2N	PAIR TRANSISTOR
	or XP6401	TRANSISTOR
Q3702	UMZ1N	PAIR TRANSISTOR
	or XP4601	TRANSISTOR
Q4304	PUMX1	PAIR TRANSISTOR
	or UMX1N	PAIR TRANSISTOR
Q4305	PUMX1	PAIR TRANSISTOR
	or UMX1N	PAIR TRANSISTOR
Q4306	PUMX1	PAIR TRANSISTOR
	or UMX1N	PAIR TRANSISTOR
Q4307	PUMX1	PAIR TRANSISTOR
	or UMX1N	PAIR TRANSISTOR
Q4601	2SC4617/QR/-X	TRANSISTOR
	or 2SD2216J/QR/-X	TRANSISTOR
Q4602	2SC4617/QR/-X	TRANSISTOR
	or 2SD2216J/QR/-X	TRANSISTOR
Q4901	2SC4617/RS/-X	TRANSISTOR
Q6001	DTC144EE	DIGI TRANSISTOR
	or PDTC144EE	DIGI TRANSISTOR
	or RN1104	DIGI TRANSISTOR
	or UN9213J	DIGI TRANSISTOR
Q6002	MCH6613	MOS FET
Q6004	2SB1188/QR/-W	TRANSISTOR
Q6201	MCH3308	MOS FET
Q6202	2SA1577/RS/-X	TRANSISTOR
Q6203	MCH3308	MOS FET
Q6204	CPH3314	MOS FET
Q6205	CPH3101	TRANSISTOR
Q6206	2SC4617/RS/-X	TRANSISTOR
Q6208	MCH3308	MOS FET
Q6210	MCH3308	MOS FET
Q6211	MCH3308	MOS FET
Q6212	HN1C01FU/G/-X	PAIR TRANSISTOR
	or PUMX1	PAIR TRANSISTOR
	or UMX1N	PAIR TRANSISTOR
Q6213	2SA1577/RS/-X	TRANSISTOR
Q6214	DTC144EE	DIGI TRANSISTOR
	or PDTC144EE	DIGI TRANSISTOR
	or RN1104	DIGI TRANSISTOR
	or UN9213J	DIGI TRANSISTOR
Q6215	HN1A01FU/G/-X	PAIR TRANSISTOR
	or PUMT1	PAIR TRANSISTOR
	or UMT1N	PAIR TRANSISTOR
Q6216	2SC4617/RS/-X	TRANSISTOR
Q6701	CPH3314	MOS FET
D1001	DA221	DIODE
D1002	RSD376	DIODE
D1003	MA8068	ZENER DIODE
D1602	DAP222	DIODE
D1603	DAP222	DIODE
D1604	DAP222	DIODE
D3001	EC2C01C	VARI CAP DIODE
D3002	EC2C01C	VARI CAP DIODE
D3003	EC2C01C	VARI CAP DIODE

# △ REF No.	PART No.	PART NAME, DESCRIPTION	# △ REF No.	PART No.	PART NAME, DESCRIPTION
	D3004	MA2Z720		R1082	NRSA6AJ-103W
	D5501	1SS355		R1083	NRSA6AJ-103W
△	D6002	RB715F		R1090	NRSA6AJ-474W
	D6201	CRS01		R1091	NRSA6AJ-474W
	D6202	CRS01		R1092	NRSA6AJ-154W
	D6203	CRS01		R1093	NRSA6AJ-154W
	D6204	CRS01		R1094	NRSA6AJ-474W
	D6205	CRS01		R1095	NRSA6AJ-474W
	D6206	RB480Y		R1096	NRSA6AJ-154W
	D6207	UDZS9.1B		R1097	NRSA6AJ-154W
	D6208	RB480Y		R1401	NRSA6AJ-105W
	D6701	EP10HY03		R1402	NRSA6AJ-102W
	D6702	EP10HY03		R1403	NRSA6AJ-103W
	R1001	NRSA6AJ-104W		R1404	NRSA6AJ-472W
	R1002	NRSA6AJ-224W		R1405	NRSA6AJ-332W
	R1003	NRSA6AJ-472W		R1406	NRSA6AJ-332W
	R1004	NRSA6AJ-103W		R1407	NRSA6AJ-332W
	R1005	NRSA6AJ-153W		R1408	NRSA6AD-753W
	R1006	NRSA6AJ-103W		R1409	NRSA6AJ-334W
	R1007	NRSA6AJ-334W		R1411	NRSA6AJ-332W
	R1008	NRSA6AJ-102W		R1412	NRSA6AJ-332W
	R1009	NRSA6AJ-561W		R1413	NRSA6AJ-332W
	R1013	NRSA6AJ-0R0W		R1414	NRSA6AJ-332W
	R1015	NRSA6AJ-474W		R1415	NRSA6AJ-472W
	R1017	NRSA6AJ-561W		R1416	NRSA6AJ-472W
	R1018	NRSA6AJ-103W		R1417	NRSA6AJ-101W
	R1019	NRSA6AJ-623W		R1421	NRSA6AJ-103W
	R1020	NRSA6AJ-331W		R1422	NRSA6AJ-153W
	R1021	NRSA6AJ-331W		R1423	NRSA6AJ-820W
	R1022	NRSA6AJ-331W		R1424	NRSA6AJ-104W
	R1023	NRSA6AJ-103W		R1601	NRSA6AJ-681W
	R1024	NRSA6AJ-823W		R1602	NRSA6AJ-124W
	R1026	NRSA6AJ-472W		R1603	NRSA6AJ-472W
	R1027	NRSA6AJ-104W		R1604	NRSA6AJ-104W
	R1028	NRSA6AJ-185W		R1605	NRV142F-R22X
	R1030	NRSA6AJ-104W		R1609	NRV142F-R33X
	R1031	NRSA6AJ-102W		R1610	NRSA6AJ-471W
	R1032	NRSA6AJ-104W		R1611	NRSA6AJ-471W
	R1033	NRSA6AJ-103W		R1612	NRSA6AJ-104W
	R1034	NRSA6AJ-103W		R1613	NRSA6AJ-102W
	R1036	NRSA6AJ-102W		R1614	NRSA6AJ-102W
	R1037	NRSA6AJ-103W		R1615	NRSA6AJ-102W
	R1038	NRSA6AJ-104W		R1616	NRSA6AJ-391W
	R1039	NRSA6AJ-103W		R1617	NRSA6AJ-683W
	R1044	NRSA6AJ-123W		R1618	NRSA6AJ-683W
	R1045	NRSA6AJ-822W		R1619	NRSA6AJ-393W
	R1046	NRSA6AJ-103W		R1620	NRSA6AJ-103W
	R1048	NRSA6AJ-104W		R1621	NRSA6AJ-103W
	R1049	NRSA6AJ-393W		R1622	NRSA6AJ-103W
	R1050	NRSA6AJ-223W		R1624	NRVA6AD-123W
	R1051	NRSA6AJ-272W		R1625	NRSA6AJ-181W
	R1052	NRSA6AJ-183W		R1626	NRSA6AJ-181W
	R1053	NRSA6AJ-154W		R1628	NRVA6AD-271W
	R1054	NRSA6AJ-473W		R1629	NRSA6AJ-564W
	R1055	NRSA6AJ-103W		R1630	NRSA6AJ-0R0W
	R1056	NRSA6AJ-472W		R1631	NRSA6AJ-0R0W
	R1058	NRSA6AJ-222W		R1635	NRSA6AJ-472W
	R1066	NRSA6AJ-473W		R1636	NRSA6AJ-103W
	R1071	NRSA6AJ-474W		R1637	NRSA6AJ-154W
	R1072	NRSA6AJ-104W		R2006	NRSA6AJ-100W
	R1078	NRSA6AJ-102W		R2007	NRSA6AJ-102W
	R1079	NRSA6AJ-102W		R2008	NRSA6AJ-102W
	R1080	NRSA6AJ-102W		R2009	NRSA6AJ-332W
	R1081	NRSA6AJ-103W			

# △ REF No.	PART No.	PART NAME, DESCRIPTION		# △ REF No.	PART No.	PART NAME, DESCRIPTION	
R2014	NRSA6AJ-820W	MG RESISTOR	82Ω,1/16W	R3050	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2015	NRSA6AJ-820W	MG RESISTOR	82Ω,1/16W	R3051	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2016	NRSA6AJ-820W	MG RESISTOR	82Ω,1/16W	R3057	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W
R2017	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W	R3059	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R2018	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W	R3066	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
R2019	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω,1/16W	R3067	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
R2020	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω,1/16W	R3068	NRSA6AJ-271W	MG RESISTOR	270Ω,1/16W
R2023	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W	R3069	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R2024	NRSA6AJ-183W	MG RESISTOR	18kΩ,1/16W	R3071	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2025	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W	R3074	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2027	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W	R3501	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
R2028	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W	R3502	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R2101	NRSA6AJ-182W	MG RESISTOR	1.8kΩ,1/16W	R3503	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R2102	NRSA6AJ-182W	MG RESISTOR	1.8kΩ,1/16W	R3504	NRSA6AD-241W	MG RESISTOR	240Ω,1/16W
R2103	NRSA6AJ-153W	MG RESISTOR	15kΩ,1/16W	R3505	NRSA6AD-241W	MG RESISTOR	240Ω,1/16W
R2104	NRSA6AJ-153W	MG RESISTOR	15kΩ,1/16W	R3506	NRSA6AD-241W	MG RESISTOR	240Ω,1/16W
R2105	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W	R3507	NRSA6AD-241W	MG RESISTOR	240Ω,1/16W
R2106	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W	R3508	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R2107	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W	R3511	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R2108	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W	R3521	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2109	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W	R3522	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R2110	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W	R3701	NRSA6AD-241W	MG RESISTOR	240Ω,1/16W
R2111	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W	R3702	NRSA6AD-241W	MG RESISTOR	240Ω,1/16W
R2112	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W	R3703	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R2113	NRSA6AJ-153W	MG RESISTOR	15kΩ,1/16W	R3706	NRSA6AD-221W	MG RESISTOR	220Ω,1/16W
R2114	NRSA6AJ-153W	MG RESISTOR	15kΩ,1/16W	R3707	NRSA6AD-221W	MG RESISTOR	220Ω,1/16W
R2117	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W	R3708	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R2118	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W	R3711	NRSA6AD-680W	MG RESISTOR	68Ω,1/16W
R2119	NRSA6AJ-153W	MG RESISTOR	15kΩ,1/16W	R3712	NRSA6AD-680W	MG RESISTOR	68Ω,1/16W
R2120	NRSA6AJ-153W	MG RESISTOR	15kΩ,1/16W	R3713	NRSA6AD-680W	MG RESISTOR	68Ω,1/16W
R2127	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W	R3714	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
R2128	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W	R3715	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2129	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W	R3717	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
R2130	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W	R3718	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
R2201	NRSA6AJ-182W	MG RESISTOR	1.8kΩ,1/16W	R3719	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2202	NRSA6AJ-182W	MG RESISTOR	1.8kΩ,1/16W	R3724	NRSA6AJ-392W	MG RESISTOR	3.9kΩ,1/16W
R3002	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W	R4202	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3004	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W	R4203	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3005	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W	R4205	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R3006	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W	R4206	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3007	NRSA6AJ-562W	MG RESISTOR	5.6kΩ,1/16W	R4207	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3008	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W	R4208	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3009	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W	R4301	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3010	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W	R4304	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3011	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W	R4305	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3013	NRSA6AJ-242W	MG RESISTOR	2.4kΩ,1/16W	R4307	NRSA6AD-333W	MG RESISTOR	33kΩ,1/16W
R3014	NRSA6AJ-392W	MG RESISTOR	3.9kΩ,1/16W	R4308	NRSA6AD-682W	MG RESISTOR	6.8kΩ,1/16W
R3015	NRSA6AJ-392W	MG RESISTOR	3.9kΩ,1/16W	R4309	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3016	NRVA6AD-560W	CMF RESISTOR	56Ω,1/16W	R4311	NRSA6AD-123W	MG RESISTOR	12kΩ,1/16W
R3017	NRVA6AD-560W	CMF RESISTOR	56Ω,1/16W	R4312	NRSA6AD-272W	MG RESISTOR	2.7kΩ,1/16W
R3018	NRVA6AD-560W	CMF RESISTOR	56Ω,1/16W	R4313	NRSA6AD-272W	MG RESISTOR	2.7kΩ,1/16W
R3019	NRVA6AD-560W	CMF RESISTOR	56Ω,1/16W	R4314	NRSA6AD-123W	MG RESISTOR	12kΩ,1/16W
R3020	NRVA6AD-512W	CMF RESISTOR	5.1kΩ,1/16W	R4315	NRSA6AD-103W	MG RESISTOR	10kΩ,1/16W
R3025	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W	R4333	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3027	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W	R4336	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3029	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W	R4337	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3030	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W	R4338	NRSA6AJ-220W	MG RESISTOR	22Ω,1/16W
R3031	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W	R4339	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3032	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W	R4340	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3033	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W	R4341	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3034	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W	R4343	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3036	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W	R4344	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3037	NRSA6AJ-681W	MG RESISTOR	680Ω,1/16W	R4346	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W

#  REF No.	PART No.	PART NAME, DESCRIPTION		#  REF No.	PART No.	PART NAME, DESCRIPTION	
R4360	NRSA6AD-102W	MG RESISTOR	1kΩ, 1/16W	R5501	NRSA6AJ-0R0W	MG RESISTOR	0Ω, 1/16W
R4362	NRSA6AD-223W	MG RESISTOR	22kΩ, 1/16W	R5503	NRSA6AJ-270W	MG RESISTOR	27Ω, 1/16W
R4363	NRSA6AJ-0R0W	MG RESISTOR	0Ω, 1/16W	R5504	NRSA6AJ-270W	MG RESISTOR	27Ω, 1/16W
R4364	NRSA6AD-123W	MG RESISTOR	12kΩ, 1/16W	R5505	NRSA6AJ-270W	MG RESISTOR	27Ω, 1/16W
R4365	NRSA6AJ-105W	MG RESISTOR	1MΩ, 1/16W	R5506	NRSA6AJ-0R0W	MG RESISTOR	0Ω, 1/16W
R4366	NRSA6AJ-105W	MG RESISTOR	1MΩ, 1/16W	R5507	NRSA6AJ-0R0W	MG RESISTOR	0Ω, 1/16W
R4367	NRSA6AD-332W	MG RESISTOR	3.3kΩ, 1/16W	R5509	NRSA6AJ-470W	MG RESISTOR	47Ω, 1/16W
R4368	NRSA6AD-223W	MG RESISTOR	22kΩ, 1/16W	R5510	NRSA6AJ-470W	MG RESISTOR	47Ω, 1/16W
R4369	NRSA6AD-332W	MG RESISTOR	3.3kΩ, 1/16W	R5511	NRSA6AJ-470W	MG RESISTOR	47Ω, 1/16W
R4370	NRSA6AD-223W	MG RESISTOR	22kΩ, 1/16W	R5512	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W
R4371	NRSA6AD-332W	MG RESISTOR	3.3kΩ, 1/16W	R5513	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W
R4372	NRSA6AD-223W	MG RESISTOR	22kΩ, 1/16W	R5514	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W
R4375	NRSA6AD-103W	MG RESISTOR	10kΩ, 1/16W	R6001	NRSA6AJ-104W	MG RESISTOR	100kΩ, 1/16W
R4376	NRSA6AD-103W	MG RESISTOR	10kΩ, 1/16W	R6002	NRSA6AJ-104W	MG RESISTOR	100kΩ, 1/16W
R4377	NRSA6AD-103W	MG RESISTOR	10kΩ, 1/16W	R6003	NRSA6AJ-224W	MG RESISTOR	220kΩ, 1/16W
R4378	NRSA6AD-103W	MG RESISTOR	10kΩ, 1/16W	R6004	NRSA6AJ-183W	MG RESISTOR	18kΩ, 1/16W
R4379	NRSA6AD-103W	MG RESISTOR	10kΩ, 1/16W	R6005	NRSA6AJ-104W	MG RESISTOR	100kΩ, 1/16W
R4380	NRSA6AD-103W	MG RESISTOR	10kΩ, 1/16W	 R6009	NRSA63J-102X	MG RESISTOR	1kΩ, 1/16W
R4381	NRSA6AD-103W	MG RESISTOR	10kΩ, 1/16W	R6010	NRSA6AJ-473W	MG RESISTOR	47kΩ, 1/16W
R4382	NRSA6AD-123W	MG RESISTOR	12kΩ, 1/16W	R6011	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W
R4383	NRSA6AD-123W	MG RESISTOR	12kΩ, 1/16W	R6012	NRSA6AD-104W	MG RESISTOR	100kΩ, 1/16W
R4384	NRSA6AD-123W	MG RESISTOR	12kΩ, 1/16W	R6013	NRSA6AD-683W	MG RESISTOR	68kΩ, 1/16W
R4385	NRSA6AD-101W	MG RESISTOR	100Ω, 1/16W	R6101	NRSA6AD-103W	MG RESISTOR	10kΩ, 1/16W
R4386	NRSA6AD-271W	MG RESISTOR	270Ω, 1/16W	R6102	NRSA6AD-751W	MG RESISTOR	750Ω, 1/16W
R4387	NRSA6AD-271W	MG RESISTOR	270Ω, 1/16W	R6103	NRSA6AD-103W	MG RESISTOR	10kΩ, 1/16W
R4388	NRSA6AD-271W	MG RESISTOR	270Ω, 1/16W	R6106	NRSA6AJ-333W	MG RESISTOR	33kΩ, 1/16W
R4601	NRSA6AJ-103W	MG RESISTOR	10kΩ, 1/16W	R6107	NRSA6AD-562W	MG RESISTOR	5.6kΩ, 1/16W
R4602	NRSA6AJ-104W	MG RESISTOR	100kΩ, 1/16W	R6108	NRSA6AJ-223W	MG RESISTOR	22kΩ, 1/16W
R4603	NRSA6AJ-223W	MG RESISTOR	22kΩ, 1/16W	R6113	NRSA6AJ-393W	MG RESISTOR	39kΩ, 1/16W
R4604	NRSA6AJ-331W	MG RESISTOR	330Ω, 1/16W	R6114	NRSA6AJ-823W	MG RESISTOR	82kΩ, 1/16W
R4605	NRSA6AJ-105W	MG RESISTOR	1MΩ, 1/16W	R6115	NRSA6AJ-823W	MG RESISTOR	82kΩ, 1/16W
R4606	NRSA6AJ-103W	MG RESISTOR	10kΩ, 1/16W	R6116	NRSA6AD-153W	MG RESISTOR	15kΩ, 1/16W
R4607	NRSA6AJ-104W	MG RESISTOR	100kΩ, 1/16W	R6117	NRSA6AJ-0R0W	MG RESISTOR	0Ω, 1/16W
R4608	NRSA6AJ-472W	MG RESISTOR	4.7kΩ, 1/16W	R6118	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W
R4609	NRSA6AJ-104W	MG RESISTOR	100kΩ, 1/16W	R6124	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W
R4610	NRSA6AJ-105W	MG RESISTOR	1MΩ, 1/16W	R6201	NRSA6AD-223W	MG RESISTOR	22kΩ, 1/16W
R4611	NRSA6AJ-243W	MG RESISTOR	24kΩ, 1/16W	R6202	NRSA6AJ-474W	MG RESISTOR	470kΩ, 1/16W
R4614	NRSA6AJ-472W	MG RESISTOR	4.7kΩ, 1/16W	R6203	NRSA6AD-103W	MG RESISTOR	10kΩ, 1/16W
R4615	NRSA6AJ-683W	MG RESISTOR	68kΩ, 1/16W	R6204	NRSA6AJ-473W	MG RESISTOR	47kΩ, 1/16W
R4616	NRSA6AJ-103W	MG RESISTOR	10kΩ, 1/16W	R6205	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W
R4617	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W	R6206	NRSA6AD-183W	MG RESISTOR	18kΩ, 1/16W
R4618	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W	R6207	NRSA6AD-123W	MG RESISTOR	12kΩ, 1/16W
R4619	NRSA6AJ-104W	MG RESISTOR	100kΩ, 1/16W	R6208	NRSA6AD-123W	MG RESISTOR	12kΩ, 1/16W
R4620	NRSA6AJ-152W	MG RESISTOR	1.5kΩ, 1/16W	R6209	NRSA6AD-153W	MG RESISTOR	15kΩ, 1/16W
R4621	NRSA6AJ-334W	MG RESISTOR	330kΩ, 1/16W	R6210	NRSA6AD-183W	MG RESISTOR	18kΩ, 1/16W
R4622	NRSA6AJ-224W	MG RESISTOR	220kΩ, 1/16W	R6212	NRSA6AD-472W	MG RESISTOR	4.7kΩ, 1/16W
R4623	NRSA6AJ-333W	MG RESISTOR	33kΩ, 1/16W	R6213	NRSA6AJ-103W	MG RESISTOR	10kΩ, 1/16W
R4624	NRSA6AJ-223W	MG RESISTOR	22kΩ, 1/16W	R6214	NRSA6AJ-152W	MG RESISTOR	1.5kΩ, 1/16W
R4901	NRSA63J-6R8X	MG RESISTOR	6.8Ω, 1/16W	R6215	NRSA6AJ-473W	MG RESISTOR	47kΩ, 1/16W
R4902	NRSA63J-6R8X	MG RESISTOR	6.8Ω, 1/16W	R6219	NRSA6AD-243W	MG RESISTOR	24kΩ, 1/16W
R4903	NRSA63J-6R8X	MG RESISTOR	6.8Ω, 1/16W	R6220	NRSA6AD-302W	MG RESISTOR	3kΩ, 1/16W
R4904	NRSA63J-6R8X	MG RESISTOR	6.8Ω, 1/16W	R6221	NRSA6AD-104W	MG RESISTOR	100kΩ, 1/16W
R4905	NRSA6AJ-271W	MG RESISTOR	270Ω, 1/16W	R6222	NRSA6AD-103W	MG RESISTOR	10kΩ, 1/16W
R4906	NRSA6AJ-333W	MG RESISTOR	33kΩ, 1/16W	R6223	NRSA6AD-123W	MG RESISTOR	12kΩ, 1/16W
R4907	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W	R6224	NRSA6AD-473W	MG RESISTOR	47kΩ, 1/16W
R4908	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W	R6225	NRSA6AD-562W	MG RESISTOR	5.6kΩ, 1/16W
R4909	NRSA6AJ-0R0W	MG RESISTOR	0Ω, 1/16W	R6226	NRSA6AD-223W	MG RESISTOR	22kΩ, 1/16W
R4911	NRSA63J-0R0X	MG RESISTOR	0Ω, 1/16W	R6227	NRSA6AD-473W	MG RESISTOR	47kΩ, 1/16W
R4914	NRSA6AJ-223W	MG RESISTOR	22kΩ, 1/16W	R6228	NRSA6AD-473W	MG RESISTOR	47kΩ, 1/16W
R4915	NRSA6AJ-182W	MG RESISTOR	1.8kΩ, 1/16W	R6229	NRSA6AD-332W	MG RESISTOR	3.3kΩ, 1/16W
R4916	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W	R6230	NRSA6AJ-272W	MG RESISTOR	2.7kΩ, 1/16W
R4917	NRSA6AJ-102W	MG RESISTOR	1kΩ, 1/16W	R6231	NRSA6AD-104W	MG RESISTOR	100kΩ, 1/16W
R4918	NRSA6AJ-0R0W	MG RESISTOR	0Ω, 1/16W	R6232	NRSA6AD-473W	MG RESISTOR	47kΩ, 1/16W

# △ REF No.	PART No.	PART NAME, DESCRIPTION		# △ REF No.	PART No.	PART NAME, DESCRIPTION	
R6233	NRSA6AJ-822W	MG RESISTOR	8.2kΩ,1/16W	C1414	NCBA1CK-223W	CAPACITOR	0.022μF,16V
R6234	NRSA6AJ-273W	MG RESISTOR	27kΩ,1/16W	C1415	NCBA1CK-223W	CAPACITOR	0.022μF,16V
R6235	NRSA6AD-683W	MG RESISTOR	68kΩ,1/16W	C1416	NCBA1AK-104W	CAPACITOR	0.1μF,10V
R6236	NRSA6AD-473W	MG RESISTOR	47kΩ,1/16W	C1601	NCBA1CK-103W	CAPACITOR	0.01μF,16V
R6237	NRSA6AD-753W	MG RESISTOR	75kΩ,1/16W	C1602	NBE20JM-106X	T CAPACITOR	10μF,6.3V
R6238	NRSA6AD-104W	MG RESISTOR	100kΩ,1/16W	C1603	NBE20JM-106X	T CAPACITOR	10μF,6.3V
R6239	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W	C1605	NCBA1AK-104W	CAPACITOR	0.1μF,10V
R6240	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W	C1606	NCBA1HK-152W	CAPACITOR	0.0015μF,50V
R6241	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W	C1607	NCBA1AK-473W	CAPACITOR	0.047μF,10V
R6242	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W	C1614	NBE20JM-106X	T CAPACITOR	10μF,6.3V
R6243	NRSA6AJ-823W	MG RESISTOR	82kΩ,1/16W	C1618	NCBA1HK-222W	CAPACITOR	0.0022μF,50V
R6701	NRZ0058-R20X	MG RESISTOR	0.2Ω,1/2W	C1619	NCBA1HK-222W	CAPACITOR	0.0022μF,50V
R6702	NRSA6AD-104W	MG RESISTOR	100kΩ,1/16W	C1620	NCBA1HK-222W	CAPACITOR	0.0022μF,50V
R6703	NRSA6AD-123W	MG RESISTOR	12kΩ,1/16W	C1621	NCB30JK-105X	CAPACITOR	1μF,6.3V
R6704	NRSA6AD-823W	MG RESISTOR	82kΩ,1/16W	C1622	NCBA1CK-223W	CAPACITOR	0.022μF,16V
R6705	NRSA6AD-333W	MG RESISTOR	33kΩ,1/16W	C1623	NCBA1AK-473W	CAPACITOR	0.047μF,10V
RA1008	NRZ0034-104W	NETWORK RESISTOR	100kΩ	C1624	NCBA1CK-103W	CAPACITOR	0.01μF,16V
RA1009	NRZ0034-104W	NETWORK RESISTOR	100kΩ	C1625	NCBA1AK-473W	CAPACITOR	0.047μF,10V
RA1010	NRZ0034-474W	NETWORK RESISTOR	470kΩ	C1626	NCBA1HK-331W	CAPACITOR	330pF,50V
RA1011	NRZ0034-474W	NETWORK RESISTOR	470kΩ	C1627	NCBA1CK-822W	CAPACITOR	0.0082μF,16V
RA1401	NRZ0034-473W	NETWORK RESISTOR	47kΩ	C1628	NCB21CK-224X	CAPACITOR	0.22μF,16V
RA3001	NRZ0034-560W	NETWORK RESISTOR	56Ω	C1632	NBE20JM-106X	T CAPACITOR	10μF,6.3V
RA3002	NRZ0034-560W	NETWORK RESISTOR	56Ω	C1633	NCB21CK-474X	CAPACITOR	0.47μF,16V
RA3003	NRZ0034-100W	NETWORK RESISTOR	10Ω	C1641	NCB21CK-474X	CAPACITOR	0.47μF,16V
RA3004	NRZ0034-103W	NETWORK RESISTOR	10kΩ	C2001	NBE20JM-106X	T CAPACITOR	10μF,6.3V
RA3005	NRZ0040-0R0X	NETWORK RESISTOR	0Ω	C2002	NBE20JM-106X	T CAPACITOR	10μF,6.3V
RA4301	NRZ0034-101W	NETWORK RESISTOR	100Ω	C2004	NCB21CK-105X	CAPACITOR	1μF,16V
RA4302	NRZ0034-101W	NETWORK RESISTOR	100Ω	C2005	NCB21CK-105X	CAPACITOR	1μF,16V
RA4303	NRZ0034-101W	NETWORK RESISTOR	100Ω	C2006	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1003	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C2007	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1004	NCFA1AZ-104W	CAPACITOR	0.1μF,10V	C2008	NCB21CK-105X	CAPACITOR	1μF,16V
C1006	NDCA1HJ-130W	CAPACITOR	13pF,50V	C2009	NCB21CK-105X	CAPACITOR	1μF,16V
C1007	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2010	NCB21CK-105X	CAPACITOR	1μF,16V
C1009	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2011	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C1010	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2012	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C1013	NCB31CK-104X	CAPACITOR	0.1μF,16V	C2013	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1015	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2014	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1016	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2015	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C1017	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2016	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1019	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2017	NCBA1AK-333W	CAPACITOR	0.033μF,10V
C1023	NCFA1AZ-104W	CAPACITOR	0.1μF,10V	C2018	NCB31CK-104X	CAPACITOR	0.1μF,16V
C1026	NCFA1AZ-104W	CAPACITOR	0.1μF,10V	C2019	NCB31CK-104X	CAPACITOR	0.1μF,16V
C1028	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2020	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1029	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2021	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1030	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2101	NCB31CK-104X	CAPACITOR	0.1μF,16V
C1031	NCF31AZ-105X	CAPACITOR	1μF,10V	C2102	NCB31CK-104X	CAPACITOR	0.1μF,16V
C1034	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2103	NCB21CK-105X	CAPACITOR	1μF,16V
C1036	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2104	NCB21CK-105X	CAPACITOR	1μF,16V
C1037	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2109	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C1038	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2110	NCB21CK-105X	CAPACITOR	1μF,16V
C1039	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2111	NCBA1EK-472W	CAPACITOR	0.0047μF,25V
C1401	NDCA1HJ-150W	CAPACITOR	15pF,50V	C2112	NCBA1EK-472W	CAPACITOR	0.0047μF,25V
C1402	NDCA1HJ-150W	CAPACITOR	15pF,50V	C2113	NCBA1EK-472W	CAPACITOR	0.0047μF,25V
C1403	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C2114	NCBA1EK-472W	CAPACITOR	0.0047μF,25V
C1404	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C2115	NCB31CK-104X	CAPACITOR	0.1μF,16V
C1405	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C2116	NCB31CK-104X	CAPACITOR	0.1μF,16V
C1406	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C2121	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1407	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C2122	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1409	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2123	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1410	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2124	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1411	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C2125	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1412	NCBA1CK-223W	CAPACITOR	0.022μF,16V	C2126	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1413	NCBA1CK-223W	CAPACITOR	0.022μF,16V	C2131	NCBA1HK-102W	CAPACITOR	0.001μF,50V

# ▲ REF No.	PART No.	PART NAME, DESCRIPTION		# ▲ REF No.	PART No.	PART NAME, DESCRIPTION	
C2132	NCBA1HK-102W	CAPACITOR	0.001μF,50V	C3514	NCBA1AK-473W	CAPACITOR	0.047μF,10V
C2133	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C3515	NCBA1AK-473W	CAPACITOR	0.047μF,10V
C2134	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C3516	NCBA1AK-473W	CAPACITOR	0.047μF,10V
C2201	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C3517	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C2202	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C3518	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3001	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C3519	NCBA1HK-102W	CAPACITOR	0.001μF,50V
C3003	NCB30JK-105X	CAPACITOR	1μF,6.3V	C3520	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3005	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C3521	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3006	NCB30JK-105X	CAPACITOR	1μF,6.3V	C3522	NCB20JM-475X	CAPACITOR	4.7μF,6.3V
C3007	NCB10JK-106X	CAPACITOR	10μF,6.3V	C3523	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3008	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C3524	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3009	NCB30JK-105X	CAPACITOR	1μF,6.3V	C3525	NCB20JM-475X	CAPACITOR	4.7μF,6.3V
C3011	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C3526	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3012	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C3527	NDCA1EJ-221W	CAPACITOR	220pF,25V
C3013	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C3528	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3015	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C3701	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3016	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C3702	NDCA1HJ-151W	CAPACITOR	150pF,50V
C3017	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C3703	NDCA1HJ-330W	CAPACITOR	33pF,50V
C3020	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C3704	NDCA1HJ-101W	CAPACITOR	100pF,50V
C3021	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C3705	NDCA1HJ-330W	CAPACITOR	33pF,50V
C3022	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C3706	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3023	NDCA1HJ-330W	CAPACITOR	33pF,50V	C3707	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3024	NCBA1HK-102W	CAPACITOR	0.001μF,50V	C3708	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3025	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C3709	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3026	NCB30JK-105X	CAPACITOR	1μF,6.3V	C3710	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3027	NCBA1EK-472W	CAPACITOR	0.0047μF,25V	C3712	NEA70GM-337X	E CAPACITOR	330μF,4.0V
C3028	NDCA1EJ-271W	CAPACITOR	270pF,25V	C3713	NEA70GM-337X	E CAPACITOR	330μF,4.0V
C3029	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C4201	NBE40GM-107X	T CAPACITOR	100μF,4.0V
C3030	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C4202	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3031	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C4203	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3032	NCBA1HK-102W	CAPACITOR	0.001μF,50V	C4204	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3033	NDCA1HJ-8R0W	CAPACITOR	8pF,50V	C4205	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3036	NDCA1HJ-8R0W	CAPACITOR	8pF,50V	C4206	NCB21CK-105X	CAPACITOR	1μF,16V
C3037	NDCA1HJ-8R0W	CAPACITOR	8pF,50V	C4207	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3038	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C4208	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3039	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C4209	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3042	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C4210	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3043	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C4211	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3044	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C4212	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3045	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C4213	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3046	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C4214	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3047	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C4215	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3048	NCB31CK-473X	CAPACITOR	0.047μF,16V	C4216	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3049	NCBA1HK-222W	CAPACITOR	0.0022μF,50V	C4217	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3050	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C4301	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3055	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C4303	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3064	NCBA1HK-102W	CAPACITOR	0.001μF,50V	C4304	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3066	NCB30JK-105X	CAPACITOR	1μF,6.3V	C4305	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3067	NCBA1HK-102W	CAPACITOR	0.001μF,50V	C4306	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3069	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C4307	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3501	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C4308	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3502	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C4309	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3503	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C4310	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3504	NCBA1AK-473W	CAPACITOR	0.047μF,10V	C4311	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3505	NCBA1CK-223W	CAPACITOR	0.022μF,16V	C4312	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3506	NCB21AK-105X	CAPACITOR	1μF,10V	C4313	NBE20JM-226X	T CAPACITOR	22μF,6.3V
C3507	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C4314	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3508	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C4315	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3509	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C4317	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3510	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C4318	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3511	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C4319	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3512	NCB31CK-104X	CAPACITOR	0.1μF,16V	C4320	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3513	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C4321	NCBA1AK-104W	CAPACITOR	0.1μF,10V

# △ REF No.	PART No.	PART NAME, DESCRIPTION		# △ REF No.	PART No.	PART NAME, DESCRIPTION	
C4323	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C4920	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4324	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C5501	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4325	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5503	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4327	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5504	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4328	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5505	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4329	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5506	NBE40GM-476X	T CAPACITOR	47μF,4.0V
C4331	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C5507	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4333	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5508	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4334	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5509	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4335	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5510	NBP21VM-105X	T CAPACITOR	1μF,35V
C4336	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5511	NBP21DM-475X	T CAPACITOR	4.7μF,20V
C4337	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5512	NBE21AM-106X	T CAPACITOR	10μF,10V
C4338	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5513	NCB31CK-104X	CAPACITOR	0.1μF,16V
C4339	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5514	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4340	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5515	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4341	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5516	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4342	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5517	NCB31CK-104X	CAPACITOR	0.1μF,16V
C4343	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5518	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4344	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C5519	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4345	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C6001	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C4346	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C6004	NCB30JK-105X	CAPACITOR	1μF,6.3V
C4347	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C6005	NDCA1HJ-101W	CAPACITOR	100pF,50V
C4348	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C6101	NCB21CK-105X	CAPACITOR	1μF,16V
C4349	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C6102	NEA71CM-106X	E CAPACITOR	10μF,16V
C4350	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C6103	NCB21CK-105X	CAPACITOR	1μF,16V
C4360	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C6105	NCB21CK-105X	CAPACITOR	1μF,16V
C4361	NBP41EM-475X	T CAPACITOR	4.7μF,25V	C6106	NCB30JK-105X	CAPACITOR	1μF,6.3V
C4366	NCB30JK-105X	CAPACITOR	1μF,6.3V	C6107	NCB30JK-105X	CAPACITOR	1μF,6.3V
C4367	NCB30JK-105X	CAPACITOR	1μF,6.3V	C6108	NCB30JK-105X	CAPACITOR	1μF,6.3V
C4369	NCB30JK-105X	CAPACITOR	1μF,6.3V	C6109	NCB30JK-105X	CAPACITOR	1μF,6.3V
C4370	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C6110	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4372	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C6111	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4373	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C6112	NCBA1AK-333W	CAPACITOR	0.033μF,10V
C4374	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C6113	NCBA1HK-561W	CAPACITOR	560pF,50V
C4379	NDCA1EJ-221W	CAPACITOR	220pF,25V	C6114	NCBA1HK-272W	CAPACITOR	0.0027μF,50V
C4380	NDCA1HJ-9R0W	CAPACITOR	9pF,50V	C6115	NCBA1HK-561W	CAPACITOR	560pF,50V
C4381	NDCA1HJ-9R0W	CAPACITOR	9pF,50V	C6116	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C4382	NDCA1HJ-9R0W	CAPACITOR	9pF,50V	C6117	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4601	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C6118	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4602	NCFA1AZ-104W	CAPACITOR	0.1μF,10V	C6119	NDCA1HJ-101W	CAPACITOR	100pF,50V
C4603	NCFA1AZ-104W	CAPACITOR	0.1μF,10V	C6120	NCB30JK-105X	CAPACITOR	1μF,6.3V
C4604	NCFA1AZ-104W	CAPACITOR	0.1μF,10V	C6121	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4605	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C6122	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C4606	NCFA1AZ-104W	CAPACITOR	0.1μF,10V	C6123	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C4607	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C6124	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C4608	NCB31CK-104X	CAPACITOR	0.1μF,16V	C6125	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C4609	NCFA1AZ-104W	CAPACITOR	0.1μF,10V	C6126	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C4610	NCB30JK-105X	CAPACITOR	1μF,6.3V	C6127	NCBA1HK-102W	CAPACITOR	0.001μF,50V
C4611	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C6128	NCB21CK-105X	CAPACITOR	1μF,16V
C4612	NCBA1CK-103W	CAPACITOR	0.01μF,16V	C6129	NCBA1HK-561W	CAPACITOR	560pF,50V
C4905	NDCA1HJ-330W	CAPACITOR	33pF,50V	C6130	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4906	NCBA1CK-223W	CAPACITOR	0.022μF,16V	C6131	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4907	NCBA1CK-223W	CAPACITOR	0.022μF,16V	C6132	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4908	NCBA1HK-102W	CAPACITOR	0.001μF,50V	C6133	NCBA1HK-471W	CAPACITOR	470pF,50V
C4909	NCBA1HK-102W	CAPACITOR	0.001μF,50V	C6134	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C4910	NCFA1AZ-104W	CAPACITOR	0.1μF,10V	C6201	NCB21CK-105X	CAPACITOR	1μF,16V
C4911	NCFA1AZ-104W	CAPACITOR	0.1μF,10V	C6202	NCB10JK-106X	CAPACITOR	10μF,6.3V
C4914	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C6203	NCBA1HK-102W	CAPACITOR	0.001μF,50V
C4915	NBE20JM-106X	T CAPACITOR	10μF,6.3V	C6204	NCBA1HK-561W	CAPACITOR	560pF,50V
C4916	NBE21AM-106X	T CAPACITOR	10μF,10V	C6205	NCB30JK-105X	CAPACITOR	1μF,6.3V
C4917	NBE21AM-106X	T CAPACITOR	10μF,10V	C6206	NCB21CK-105X	CAPACITOR	1μF,16V
C4918	NCBA1AK-104W	CAPACITOR	0.1μF,10V	C6207	NCB10JK-106X	CAPACITOR	10μF,6.3V
C4919	NCFA1AZ-104W	CAPACITOR	0.1μF,10V	C6208	NCBA1EK-472W	CAPACITOR	0.0047μF,25V

#	△	REF No.	PART No.	PART NAME, DESCRIPTION	#	△	REF No.	PART No.	PART NAME, DESCRIPTION	
C6209			NCB21CK-105X	CAPACITOR	1μF,16V	L6202		NQL52EM-390X	COIL	39μH
C6210			NCB10JK-106X	CAPACITOR	10μF,6.3V	L6203		NQL52EM-390X	COIL	39μH
C6211			NCBA1HK-102W	CAPACITOR	0.001μF,50V	L6204		NQL144K-220X	COIL	22μH
C6214			NCB21CK-105X	CAPACITOR	1μF,16V	L6206		NQLZ011-470X	COIL	47μH
C6215			NCB21CK-105X	CAPACITOR	1μF,16V	L6207		NQLZ011-470X	COIL	47μH
C6216			NCBA1AK-683W	CAPACITOR	0.068μF,10V	L6208		NQLZ011-221X	COIL	220μH
C6217			NCB21CK-105X	CAPACITOR	1μF,16V	L6701		NQLZ010-100X	COIL	10μH
C6218			NCB21CK-105X	CAPACITOR	1μF,16V	X1001		NAX0474-001X	C OSCILLATOR	
C6219			NCB21CK-224X	CAPACITOR	0.22μF,16V	X1002		NAX0325-001X	CRYSTAL RESONATOR	
C6220			NCB21CK-105X	CAPACITOR	1μF,16V	X1401		NAX0204-001X	CRYSTAL RESONATOR	
C6221			NCB11EK-105X	CAPACITOR	1μF,25V	X3002		NAX0480-001X	CRYSTAL RESONATOR	
C6222			NCB11EK-105X	CAPACITOR	1μF,25V	X5501		NAX0356-001X	CXO	
C6225			NCBA1CK-103W	CAPACITOR	0.01μF,16V	K4311		NQR0129-002X	FERRITE BEAD	
C6226			NCB21CK-105X	CAPACITOR	1μF,16V	WR1		WJJ0206-001A	E-SI C WIRE C-C,CN104-REAR UNIT	
C6227			NCB11EK-105X	CAPACITOR	1μF,25V	J101		NNZ0041-001X	D CONNECTOR	
C6228			NCB11EK-105X	CAPACITOR	1μF,25V	CN101		QGF0508F1-40X	FPC CONNECTOR	
C6230			NCB21CK-105X	CAPACITOR	1μF,16V	CN103		QGF0505F1-20X	FPC CONNECTOR	
C6701			NCB21CK-105X	CAPACITOR	1μF,16V	CN104		QGA1002C1-10X	CONNECTOR	
C6703			NCB21CK-105X	CAPACITOR	1μF,16V	CN105		QGB0801K2-20X	CONNECTOR	
L1002			NQL315K-100X	COIL	10μH	CN106		QGA1201C2-03X	CONNECTOR	
L1401			NQR0006-001X	FERRITE BEAD		CN107		QGF0507F3-20X	FFC/FPC CONNECTOR	
L2001			NQL315K-100X	COIL	10μH	CN108		QGF0507F3-22X	FFC/FPC CONNECTOR	
L2002			NQL38DK-220X	COIL	22μH	CN109		QGF0507F3-15X	FFC/FPC CONNECTOR	
L2201			NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	CN110		QGF0505F1-08X	FPC CONNECTOR	
L2202			NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	CN111		QGF0503C1-06V	FFC/FPC CONNECTOR	
L2203			NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	CN112		QGF0505F2-18X	FPC CONNECTOR	
L3001			NQR0129-002X	FERRITE BEAD		CN113		QGF0508F1-34X	FPC CONNECTOR	
L3002			NQR0129-002X	FERRITE BEAD		△ F6101		NMFZ007-2R0X-K	FUSE	T2.0A,50V
L3004			NQR0006-001X	FERRITE BEAD		OT1		LY43770-003A	SPACER(CAPSTAN)	
L3005			NQR0006-001X	FERRITE BEAD		OT2		LY43770-004A	SPACER(CAPSTAN)	
L3007			NQL085J-2R2X	COIL	2.2μH	SD1		LY32080-001A	SHIELD CASE	
L3008			NQL085J-120X	COIL	12μH					
L3012			NQR0129-002X	FERRITE BEAD						
L3015			NQR0006-001X	FERRITE BEAD						
L3501			NQR0129-002X	FERRITE BEAD						
L3502			NQL402M-100X	COIL	10μH	*****				
L3503			NQR0006-001X	FERRITE BEAD		MONITOR BOARD ASSEMBLY <02>				
L3504			NQR0006-001X	FERRITE BEAD						
L3505			NQR0006-001X	FERRITE BEAD						
L3701			NQL38DK-100X	COIL	10μH	PW		YB10369B	MONITOR BOARD ASSY	
L4201			NQR0129-002X	FERRITE BEAD		IC7601		MN5814	IC	
L4301			NQR0129-002X	FERRITE BEAD		IC7602		BA4558F	IC	
L4302			NQR0129-002X	FERRITE BEAD		IC7603		SN74AHC1G04K	IC	
L4303			NQL315K-100X	COIL	10μH	IC7604		TC7SH32FU	IC(DIGITAL)	
L4304			NQL315K-220X	COIL	22μH	IC7605		TC7SH32FU	IC(DIGITAL)	
L4305			NQR0129-002X	FERRITE BEAD		Q7601		2SC4617/QR/-X	TRANSISTOR	
L4306			NQR0129-002X	FERRITE BEAD		Q7602		2SA1774/QR/-X	TRANSISTOR	
L4307			NQL315K-100X	COIL	10μH	Q7603		2SC4617/QR/-X	TRANSISTOR	
L4308			NQL38DK-100X	COIL	10μH	Q7604		2SA1774/QR/-X	TRANSISTOR	
L4311			NQL38DK-100X	COIL	10μH	Q7606		DTA144EE	DIGI TRANSISTOR	
L4601			NQL302N-100X	COIL	10μH			or RN2104	DIGI TRANSISTOR	
L4901			NQL315K-100X	COIL	10μH			or UN9113J	DIGI TRANSISTOR	
L4902			NQR0129-002X	FERRITE BEAD		Q7607		DTC144EE	DIGI TRANSISTOR	
L4903			NQL315K-100X	COIL	10μH			or RN1104	DIGI TRANSISTOR	
L5501			NQL315K-100X	COIL	10μH			or UN9213J	DIGI TRANSISTOR	
L5502			NQR0129-002X	FERRITE BEAD		Q7609		DTC144EE	DIGI TRANSISTOR	
L5503			NQR0129-002X	FERRITE BEAD				or RN1104	DIGI TRANSISTOR	
L5504			NQR0129-002X	FERRITE BEAD				or UN9213J	DIGI TRANSISTOR	
L5505			NQL315K-100X	COIL	10μH	D7601		MA365	VARI CAP DIODE	
L5506			NQL315K-100X	COIL	10μH	D7602		RB471E	SB DIODE	
L6101			NQLZ011-4R7X	COIL	4.7μH	D7603		UDZS5.1B	ZENER DIODE	
L6102			NQLZ011-4R7X	COIL	4.7μH	R3		NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
L6201			NQL52EM-390X	COIL	39μH	R4		NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W

#	△ REF No.	PART No.	PART NAME, DESCRIPTION	
	C7624	NCB31EK-103X	CAPACITOR	0.01μF,25V
	C7625	NCB31EK-103X	CAPACITOR	0.01μF,25V
	C7626	NBP41EM-475X	T CAPACITOR	4.7μF,25V
	C7627	NCB31EK-103X	CAPACITOR	0.01μF,25V
	C7632	NCF31CZ-104X	CAPACITOR	0.1μF,16V
	C7634	NCF31CZ-104X	CAPACITOR	0.1μF,16V
	L7601	NQL315K-100X	COIL	10μH
	L7602	NQL315K-100X	COIL	10μH
	L7604	NQL315K-100X	COIL	10μH
	L7605	NQL085J-4R7X	COIL	4.7μH
	L7606	NQL315K-100X	COIL	10μH
	SW2	NSW0008-001X	TACT SWITCH,STOP/BACKLIGHT	
	SW3	NSW0008-001X	TACT SWITCH,REW/NIGHT ALIVE	
	SW4	NSW0008-001X	TACT SWITCH,PLAY/PAUSE	
	SW5	NSW0008-001X	TACT SWITCH,FF	
	SW7601	NSW0105-001X	DETECT SWITCH,MONITOR OPEN	
△	BT1	QAB0025-001	LI BATTERY	
	CN761	QGF0508F1-40X	FPC CONNECTOR	
	CN763	QGF0507F3-20X	FFC/FPC CONNECTOR	
	CN764	QGF0508F1-33X	FPC CONNECTOR	

LCD BL BOARD ASSEMBLY <03>

	F7501	NMFZ007-R40X-K	FUSE	T0.4A.50V
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#	△	REF No.	PART No.	PART NAME, DESCRIPTION	

CCD BOARD ASSEMBLY <04>					
PW			YB20924A-SS	CCD BOARD ASSY	
Q5001			2SC3931/CD/-X	TRANSISTOR	
R5001			NRSA63J-472X	MG RESISTOR	4.7kΩ, 1/16W
R5003			NRSA63J-103X	MG RESISTOR	10kΩ, 1/16W
R5005			NRSA63J-105X	MG RESISTOR	1MΩ, 1/16W
C5001			NCB31CK-104X	CAPACITOR	0.1μF, 16V
C5002			NBP41VM-225X	T CAPACITOR	2.2μF, 35V
C5003			NCB31CK-104X	CAPACITOR	0.1μF, 16V
C5004			NBP41CM-106X	T CAPACITOR	10μF, 16V
C5005			NCB31CK-104X	CAPACITOR	0.1μF, 16V
C5006			NCB31CK-104X	CAPACITOR	0.1μF, 16V
C5007			NCB31HK-102X	CAPACITOR	0.001μF, 50V
C5010			NCB31EK-103X	CAPACITOR	0.01μF, 25V
L5001			NQL315K-100X	COIL	10μH
CN5001			QGF0505F1-20X	FPC CONNECTOR	

JUNCTION BOARD ASSEMBLY <05>					
PW2			YB20925A2-01	JUNCTION BOARD ASSY	
D571			SML-010MT-X	LE DIODE	
SW571			NSW0120-002X	PUSH SWITCH, OPEN EJECT	
CN571			QGF0508F1-34X	FPC CONNECTOR	
CN572			QGF0507F3-15X	FFC/FPC CONNECTOR	
CN573			QGF0505F2-11X	FPC CONNECTOR	
CN574			QGF0505F2-06X	FPC CONNECTOR	

JACK BOARD ASSEMBLY <06>					
PW1			YB20925A1-01	JACK BOARD ASSY	
IC501			BA10358F-XE	IC	
IC502			RPM7138-V4	IR DETECT UNIT	
Q501			RPM-22PB	PHOTO TRANSISTOR	
D501			MA8068	ZENER DIODE	
D502			MA8068	ZENER DIODE	
D504			MA8068	ZENER DIODE	
R501			NRSA63J-103X	MG RESISTOR	10kΩ, 1/16W
R502			NRSA63J-684X	MG RESISTOR	680kΩ, 1/16W
R503			NRSA63J-182X	MG RESISTOR	1.8kΩ, 1/16W
R504			NRSA63J-222X	MG RESISTOR	2.2kΩ, 1/16W
R505			NRSA63J-103X	MG RESISTOR	10kΩ, 1/16W
R506			NRSA63J-824X	MG RESISTOR	820kΩ, 1/16W
R507			NRSA63J-104X	MG RESISTOR	100kΩ, 1/16W
R508			NRSA63J-683X	MG RESISTOR	68kΩ, 1/16W
R509			NRSA63J-822X	MG RESISTOR	8.2kΩ, 1/16W
R510			NRSA63J-0R0X	MG RESISTOR	0Ω, 1/16W
R511			NRSA63J-302X	MG RESISTOR	3kΩ, 1/16W
R512			NRSA63J-470X	MG RESISTOR	47Ω, 1/16W
R513			NRSA63J-101X	MG RESISTOR	100Ω, 1/16W
R514			NRSA63J-101X	MG RESISTOR	100Ω, 1/16W
R525			NRSA63J-0R0X	MG RESISTOR	0Ω, 1/16W

#	△	REF No.	PART No.	PART NAME, DESCRIPTION	
R526			NRSA63J-0R0X	MG RESISTOR	0Ω, 1/16W
R527			NRSA63J-0R0X	MG RESISTOR	0Ω, 1/16W
C501			NBE21AM-335X	T CAPACITOR	3.3μF, 10V
C502			NCF31CZ-104X	CAPACITOR	0.1μF, 16V
C503			NCB31EK-153X	CAPACITOR	0.015μF, 25V
C504			NCB31EK-153X	CAPACITOR	0.015μF, 25V
C506			NBE21AM-106X	T CAPACITOR	10μF, 10V
C509			NBE20JM-226X	T CAPACITOR	22μF, 6.3V
C514			NCB31HK-103X	CAPACITOR	0.01μF, 50V
C515			NCB31HK-103X	CAPACITOR	0.01μF, 50V
L501			NQR0251-004X	FERRITE BEAD	
L502			NQR0251-004X	FERRITE BEAD	
L503			NQR0251-004X	FERRITE BEAD	
J501			QNS0078-001	3.5 JACK	
J503			QND0004-001	S JACK	
CN502			QGF0508F1-20X	FPC CONNECTOR	

B/W VF BOARD ASSEMBLY <08>					
PW			YB20910B	B/W VF BOARD ASSY	
IC7001			MCVVQ111FB	IC	
Q7001			PUMX1	PAIR TRANSISTOR	
D7001			NSCW100A0/ST/-X	LE DIODE	
D7002			MA111	DIODE	
R7001			NRSA63J-103X	MG RESISTOR	10kΩ, 1/16W
R7002			NRSA63J-182X	MG RESISTOR	1.8kΩ, 1/16W
R7003			NRSA63J-183X	MG RESISTOR	18kΩ, 1/16W
R7004			NRSA63J-0R0X	MG RESISTOR	0Ω, 1/16W
R7006			NRVA63D-333X	CMF RESISTOR	33kΩ, 1/16W
R7007			NRVA63D-153X	CMF RESISTOR	15kΩ, 1/16W
R7008			NRVA63D-473X	CMF RESISTOR	47kΩ, 1/16W
R7009			NRSA63J-682X	MG RESISTOR	6.8kΩ, 1/16W
R7010			NRSA63J-102X	MG RESISTOR	1kΩ, 1/16W
R7011			NRSA63J-332X	MG RESISTOR	3.3kΩ, 1/16W
R7012			NRSA63J-561X	MG RESISTOR	560Ω, 1/16W
R7013			NRSA63J-470X	MG RESISTOR	47Ω, 1/16W
VR7001			NVP0016-223X	TRIM RESISTOR, GAIN	
C7001			NCF31CZ-104X	CAPACITOR	0.1μF, 16V
C7002			NCF31CZ-104X	CAPACITOR	0.1μF, 16V
C7003			NCB21AK-105X	CAPACITOR	1μF, 10V
C7004			NCB31EK-223X	CAPACITOR	0.022μF, 25V
C7005			NCB31EK-103X	CAPACITOR	0.01μF, 25V
C7006			NCF21CZ-105X	CAPACITOR	1μF, 16V
C7007			NCF31CZ-104X	CAPACITOR	0.1μF, 16V
C7008			NCF31CZ-104X	CAPACITOR	0.1μF, 16V
C7009			NCF31CZ-104X	CAPACITOR	0.1μF, 16V
C7010			NCF31CZ-104X	CAPACITOR	0.1μF, 16V
C7011			NCB31HK-102X	CAPACITOR	0.001μF, 50V
C7012			NCB31EK-103X	CAPACITOR	0.01μF, 25V
C7013			NCF31CZ-104X	CAPACITOR	0.1μF, 16V
C7014			NCF31CZ-104X	CAPACITOR	0.1μF, 16V
C7015			NCB31EK-103X	CAPACITOR	0.01μF, 25V
C7016			NCB11CK-475X	CAPACITOR	4.7μF, 16V
C7017			NCB10JK-106X	CAPACITOR	10μF, 6.3V
L7001			NQL38DK-100X	COIL	10μH
L7002			NQL38DK-100X	COIL	10μH
CN7001			QGF0517F1-06X	FPC CONNECTOR	
CN7002			QGF0517F2-20X	FPC CONNECTOR	

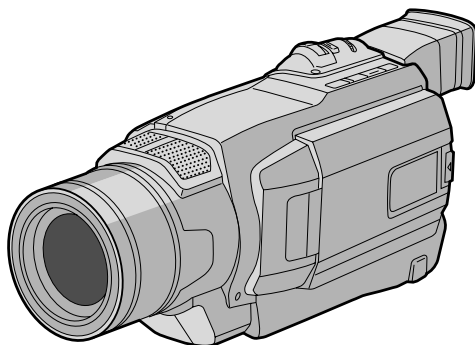
JVC

SCHEMATIC DIAGRAMS

DIGITAL VIDEO CAMERA

GR-DVL145EG

CD-ROM No.SML200205



Mini **DV** PAL

SPECIFICATIONS *(The specifications shown pertain specifically to the model GR-DVL145EG/EK)*

Camcorder

General

Power supply	: DC 11.0 V  (Using AC Adapter) DC 7.2 V  (Using battery pack)
Power consumption	
LCD monitor off, viewfinder on	: Approx. 4.3 W
LCD monitor on, viewfinder off	: Approx. 5.3 W
Dimensions (W x H x D)	: 83 mm x 94 mm x 223 mm (with the LCD monitor closed and the viewfinder pushed down)
Weight	: Approx. 630 g
Operating temperature	: 0°C to 40°C
Operating humidity	: 35% to 80%
Storage temperature	: -20°C to 50°C
Pickup	: 1/4" CCD
Lens	: F 1.6, f = 3.9 mm to 62.4 mm, 16:1 power zoom lens
Filter diameter	: ϕ 40.5 mm
LCD monitor	: 2.5" diagonally measured, LCD panel/TFT active matrix system
Viewfinder	: Electronic viewfinder with 0.24" black/white LCD
Speaker	: Monaural

Digital Video Camera

Format	: DV format (SD mode)
Signal format	: PAL standard
Recording/Playback format	: Video: Digital component recording : Audio: PCM digital recording, 32 kHz 4-channel (12-bit), 48 kHz 2-channel (16-bit)
Cassette	: Mini DV cassette
Tape speed	: SP: 18.8 mm/s : LP: 12.5 mm/s
Maximum recording time (using 80 min. cassette)	: SP: 80 min. : LP: 120 min.

Connectors

S-Video Output	: Y: 1 V (p-p), 75 Ω , analogue : C: 0.29 V (p-p), 75 Ω , analogue
AV	
Video output	: 1 V (p-p), 75 Ω , analogue
Audio output	: 300 mV (rms), 1 k Ω , analogue, stereo
DV Output	: 4-pin, IEEE 1394 compliant

AC Adapter

Power requirement	: AC 110 V to 240 V~, 50 Hz/60 Hz
Output	: DC 11 V  , 1 A

Specifications shown are for SP mode unless otherwise indicated. E & O.E.
Design and specifications subject to change without notice.

SECTION 4 CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions

The Components identified by the symbol  are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

- 1) All resistance values are in ohm. 1/6 W, 1/8 W (refer to parts list).
Chip resistors are 1/16 W.
K: K Ω (1000 Ω), M: M Ω (1000K Ω)
- 2) All capacitance values are in μ F, (P: PF).
- 3) All inductance values are in μ H, (m: mH).
- 4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

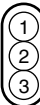
AUX : Active at high.

$\overline{\text{AUX}}$ or AUX(L) : Active at low.

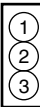
3. Interpreting Connector indications



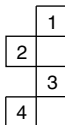
Removable connector



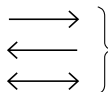
Wire soldered directly on board



Non-removable Board connector



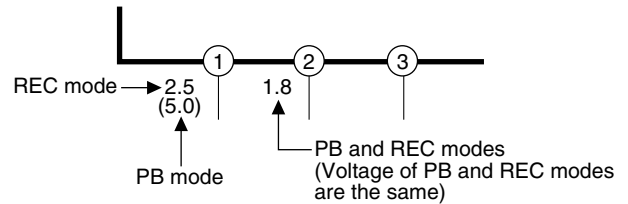
Board to Board



Connected pattern on board
The arrows indicate signal path

4. Voltage measurement

- 1) Regulator (DC/DC CONV) circuits
REC : Colour bar signal.
PB : Alignment tape (Colour bar).
— : Unmeasurable or unnecessary to measure.
- 4) Indication on schematic diagram
Voltage Indications for REC and PB mode on the schematic diagram are as shown below.

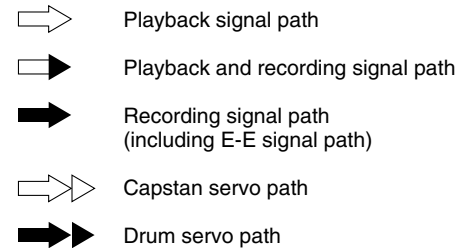


Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

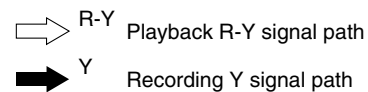
5. Signal path Symbols

The arrows indicate the signal path as follows.

NOTE : The arrow is DVC unique object.



(Example)



6. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



7. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.



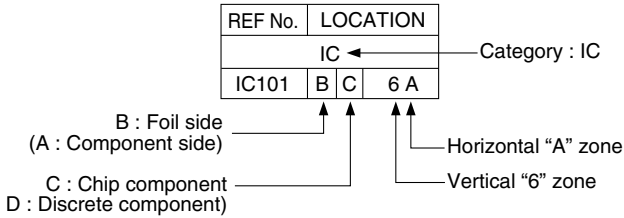
CIRCUIT BOARD NOTES

1. Foil and Component sides

- 1) Foil side (B side) :
Parts on the foil side seen from foil face (pattern face) are indicated.
- 2) Component side (A side) :
Parts on the component side seen from component face (parts face) indicated.

2. Parts location guides

Parts location are indicated by guide scale on the circuit board.



Note: For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

5

4

3

2

1



B

C

4-

4-

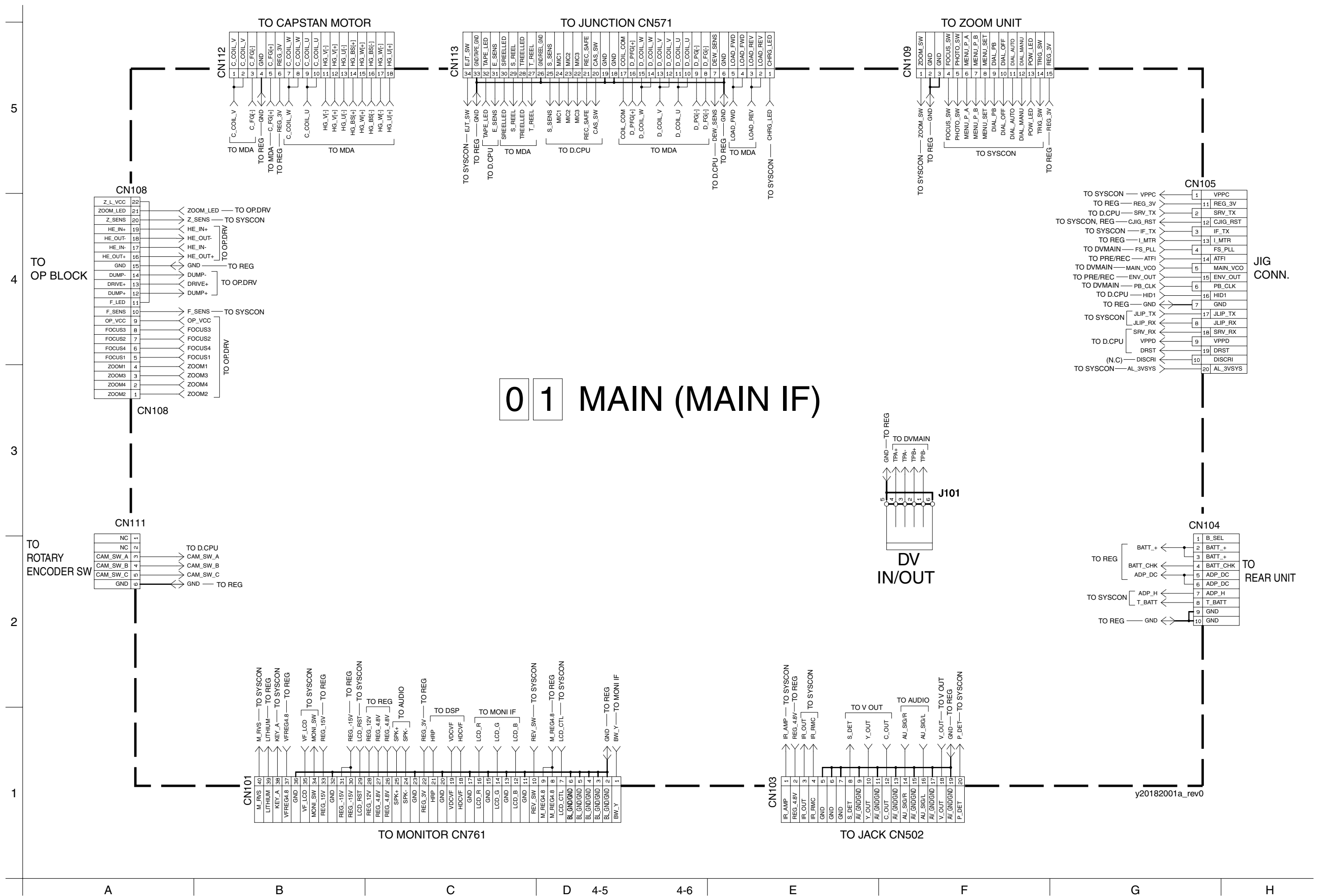
E

F

G

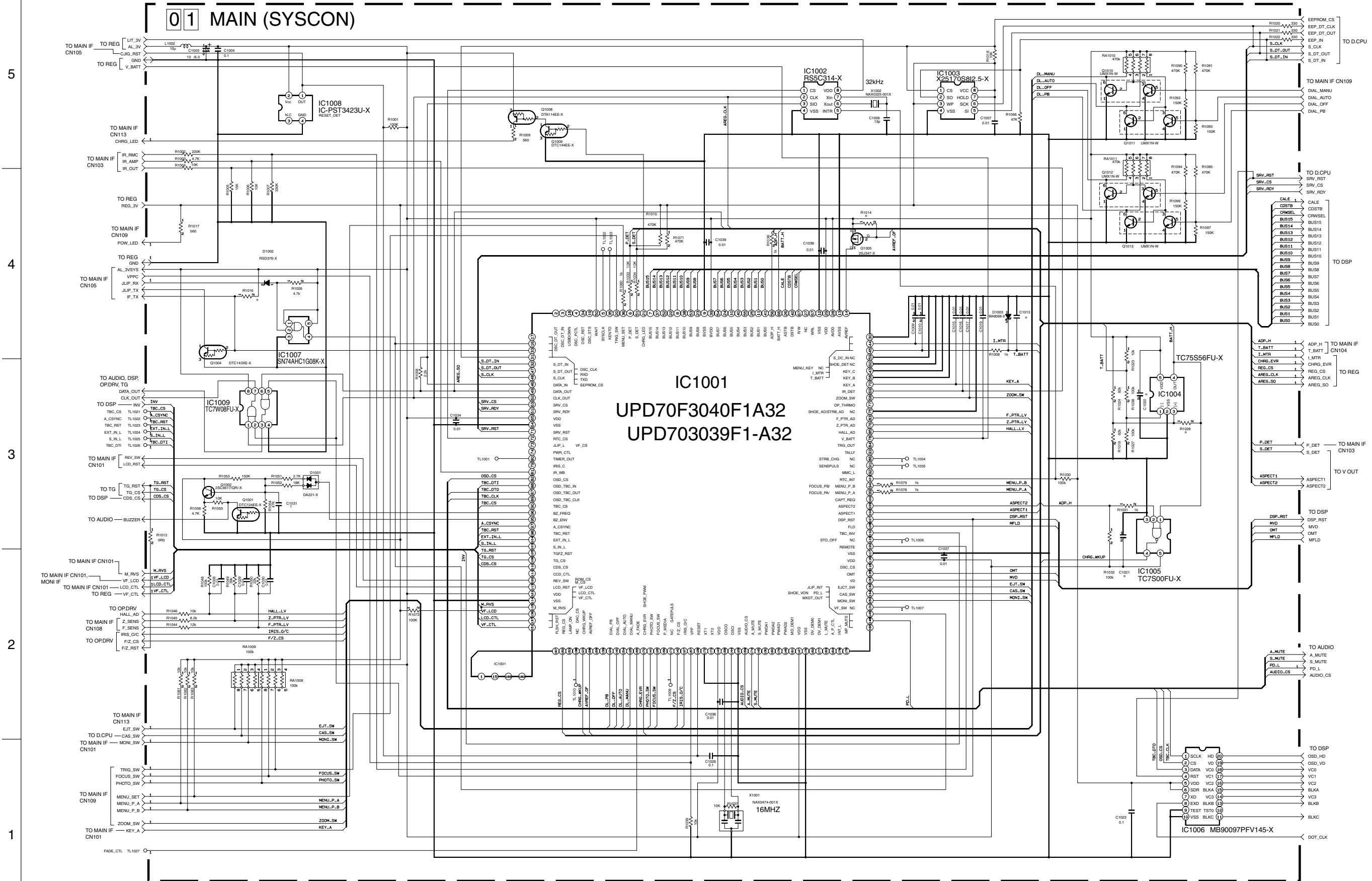
H

4.2 MAIN IF SCHEMATIC DIAGRAM



4.3 SYSCON SCHEMATIC DIAGRAM

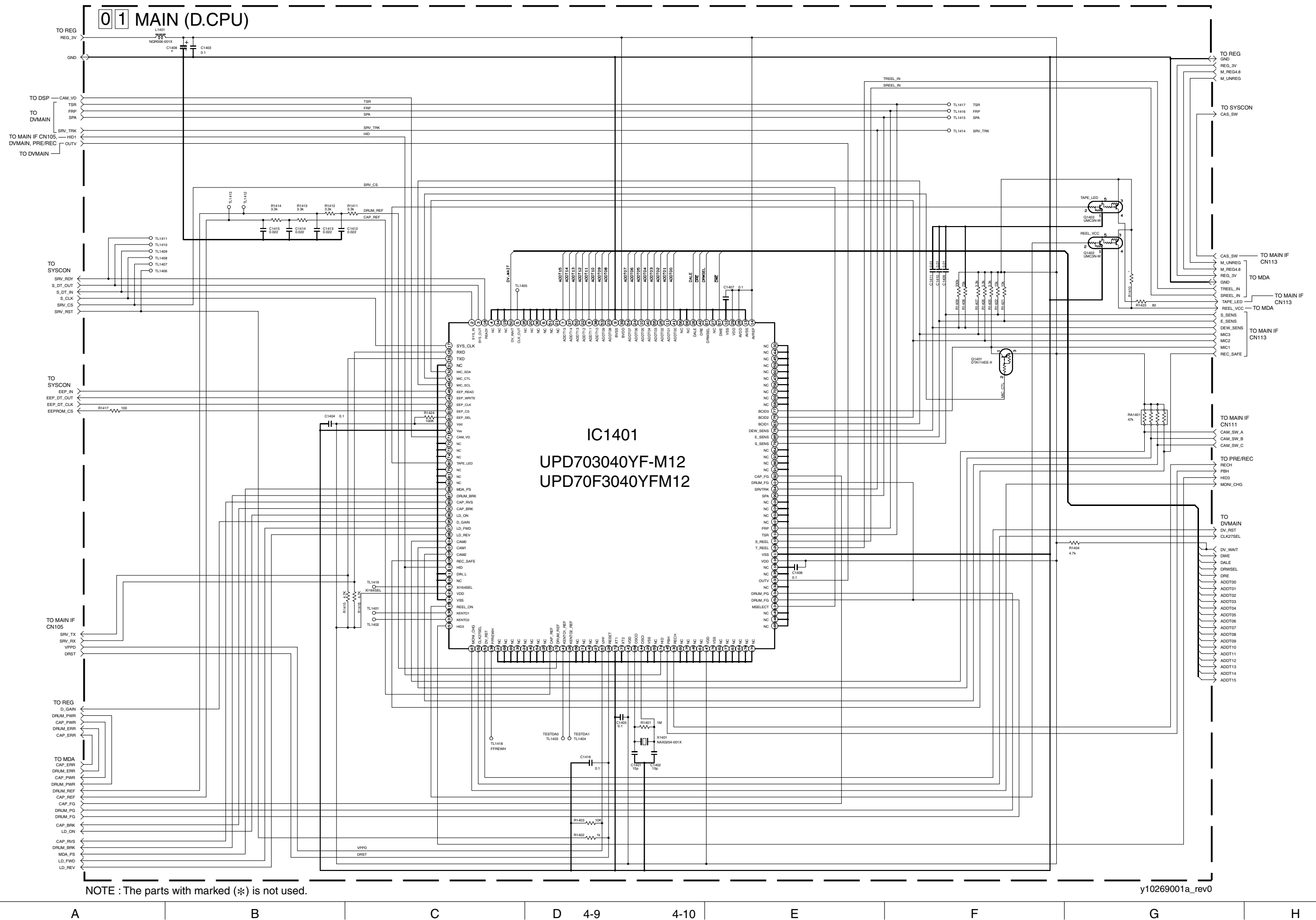
- NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
- When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



4.4 D.CPU SCHEMATIC DIAGRAM

NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".

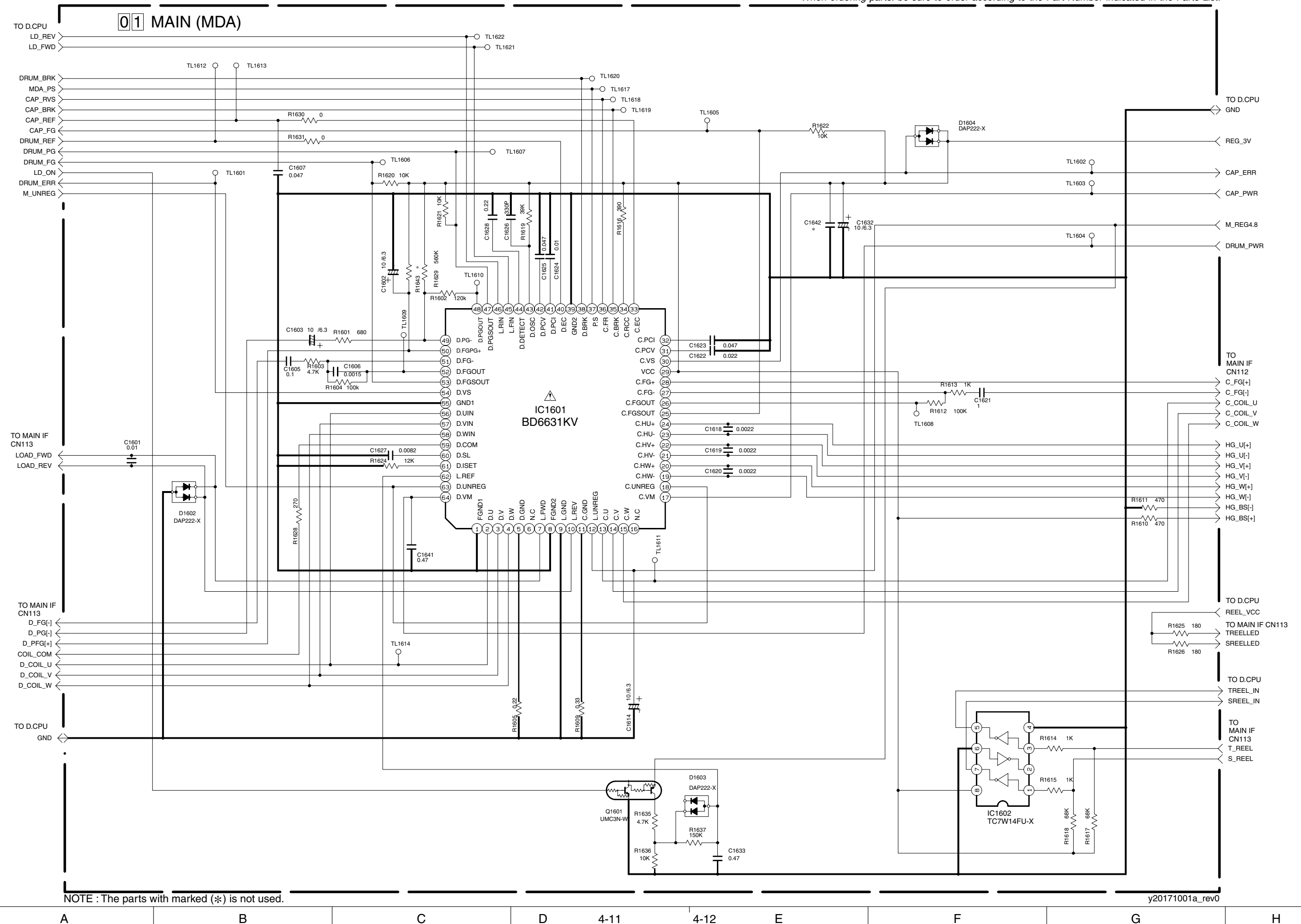
● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



4.5 MDA SCHEMATIC DIAGRAM

NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".

● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



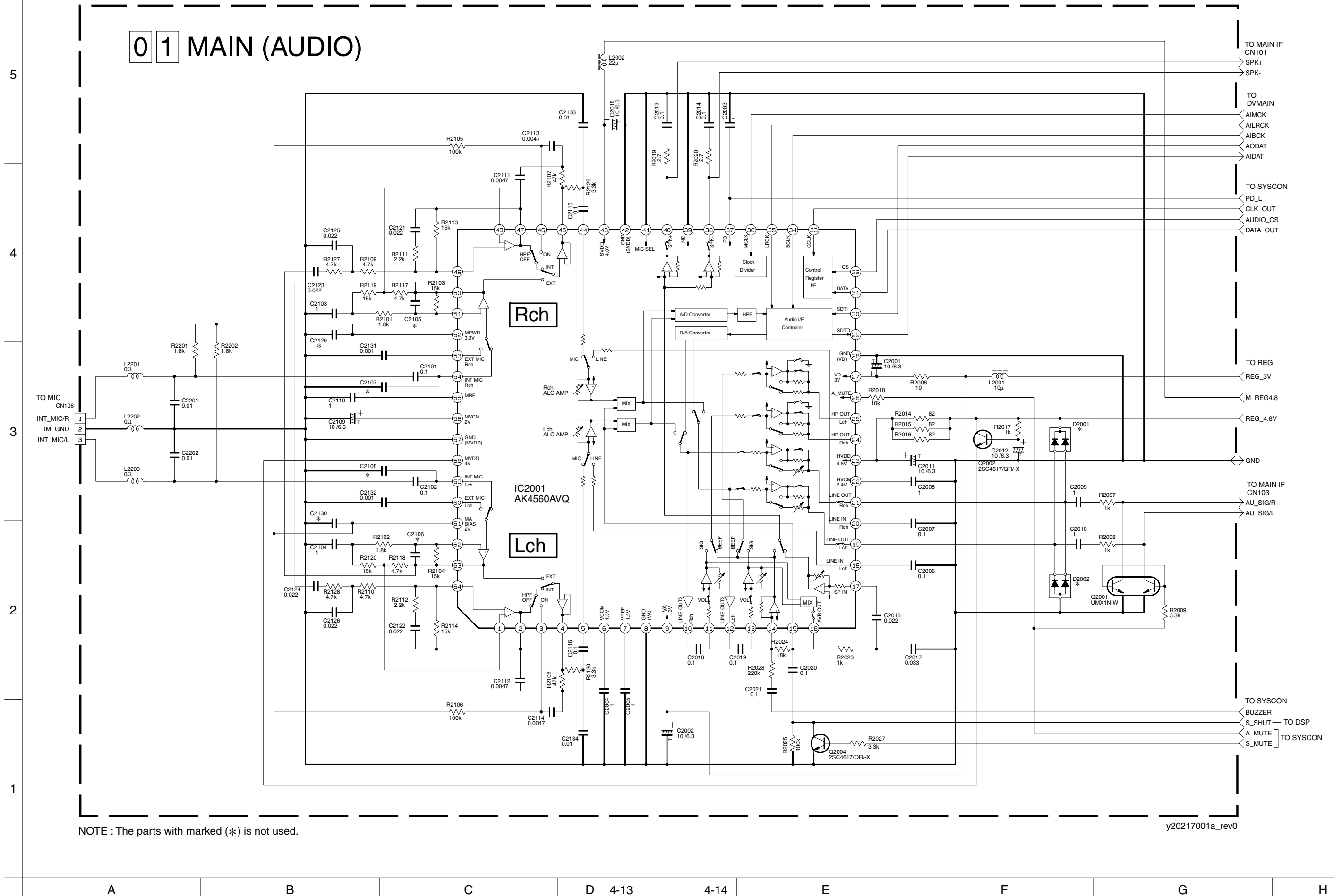
NOTE : The parts with marked (*) is not used.

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4.6 AUDIO SCHEMATIC DIAGRAM

NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".

● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



5

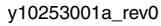
4

3

2

1

4-



A

P

C

D

4-15

4-

E

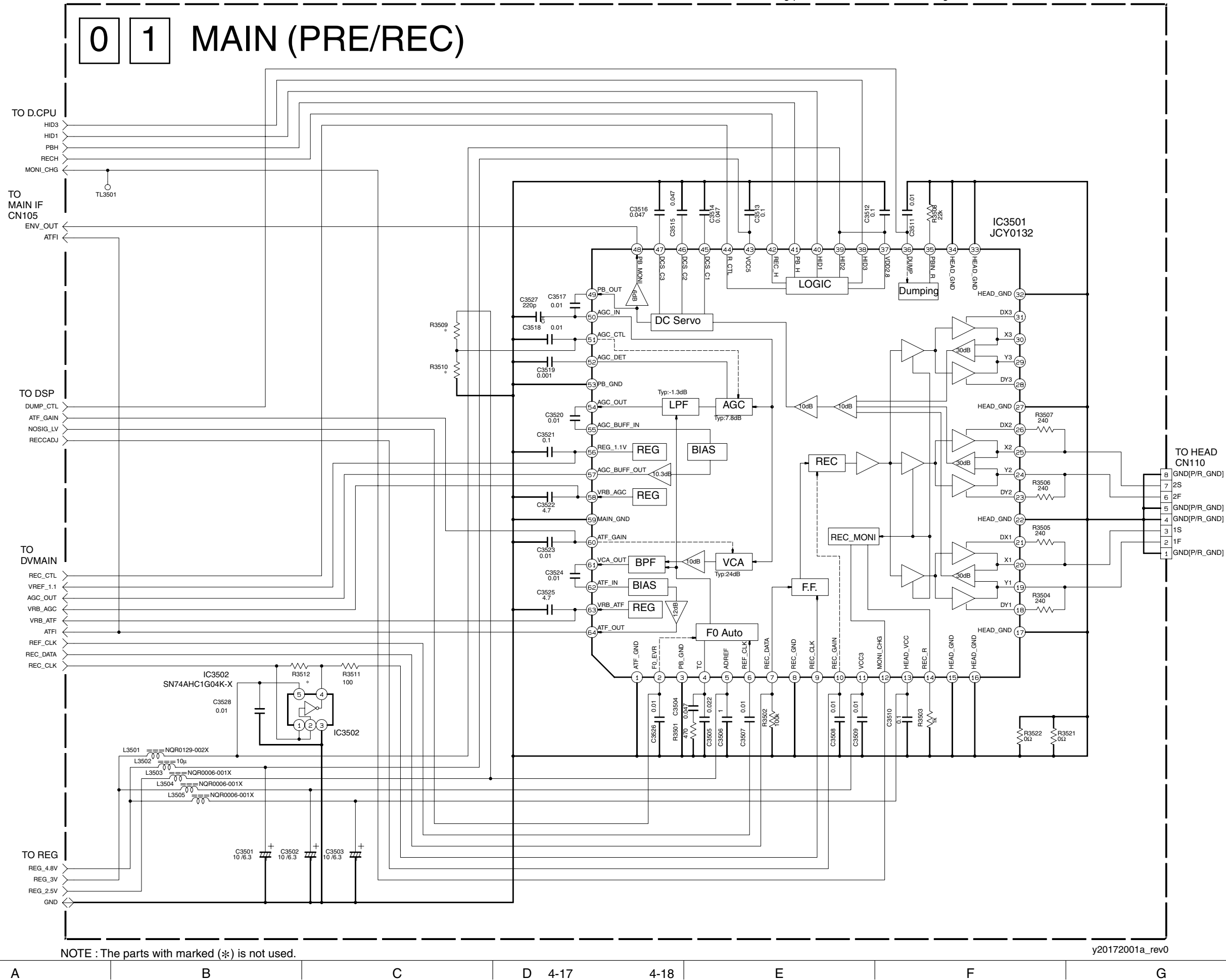
F

G

H

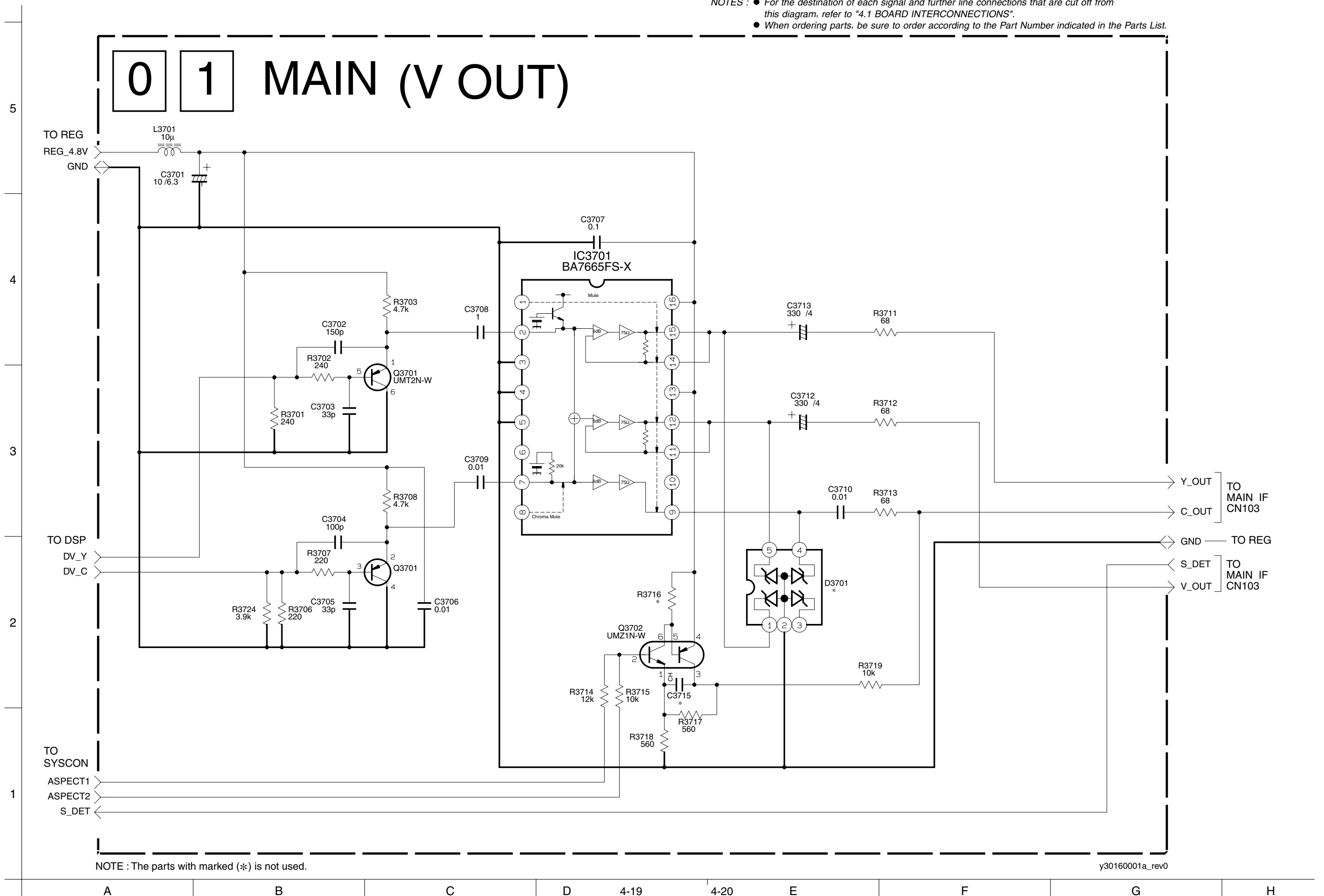
4.8 PRE/REC SCHEMATIC DIAGRAM

NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



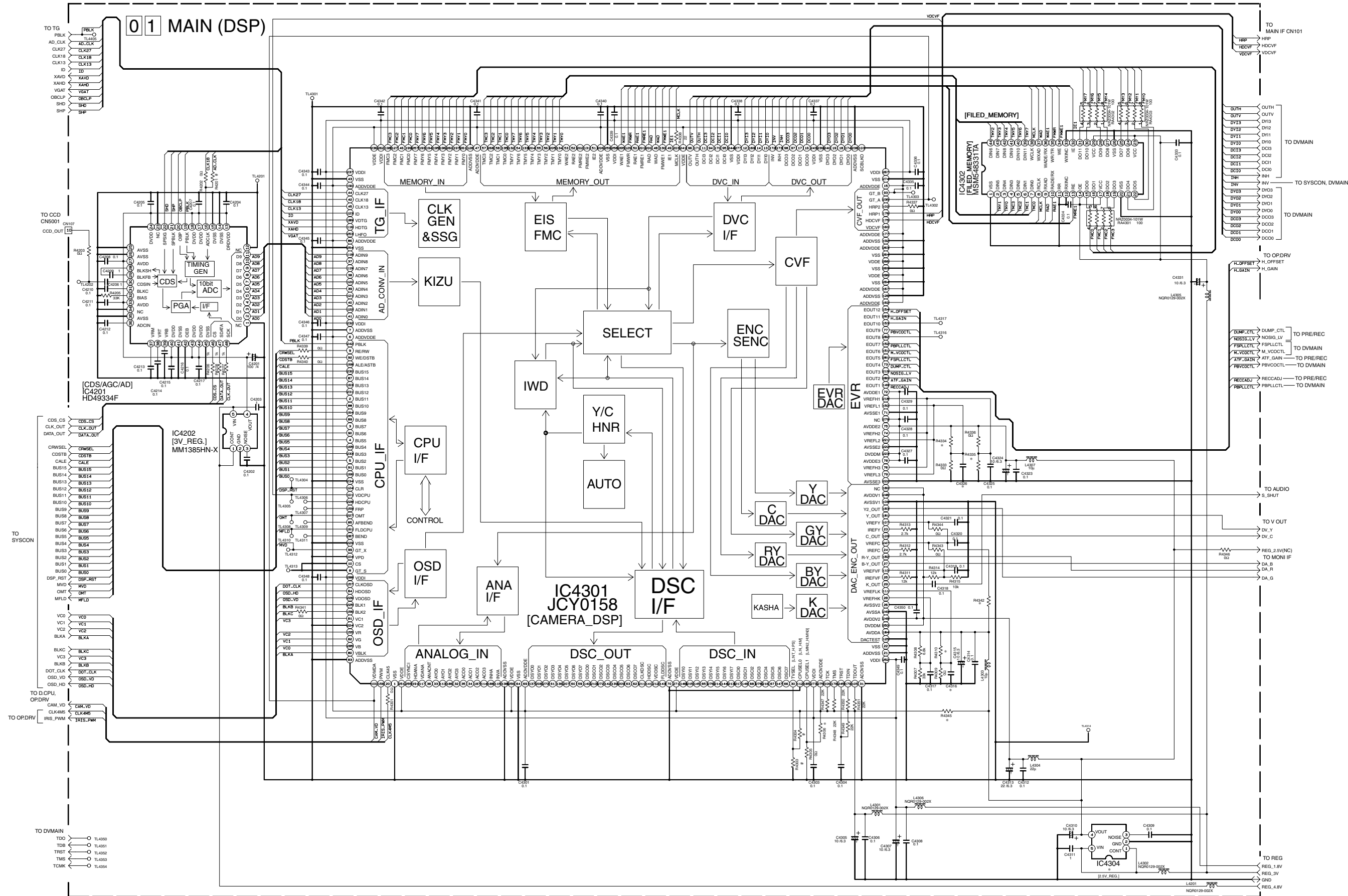
4.9 V OUT SCHEMATIC DIAGRAM

NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



4.10 DSP SCHEMATIC DIAGRAM

- NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
- When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



NOTE : The parts with marked (*) is not used.

	#Difference Point	
	R4302	R4303
NTSC	0Ω	*
PAL	*	0Ω

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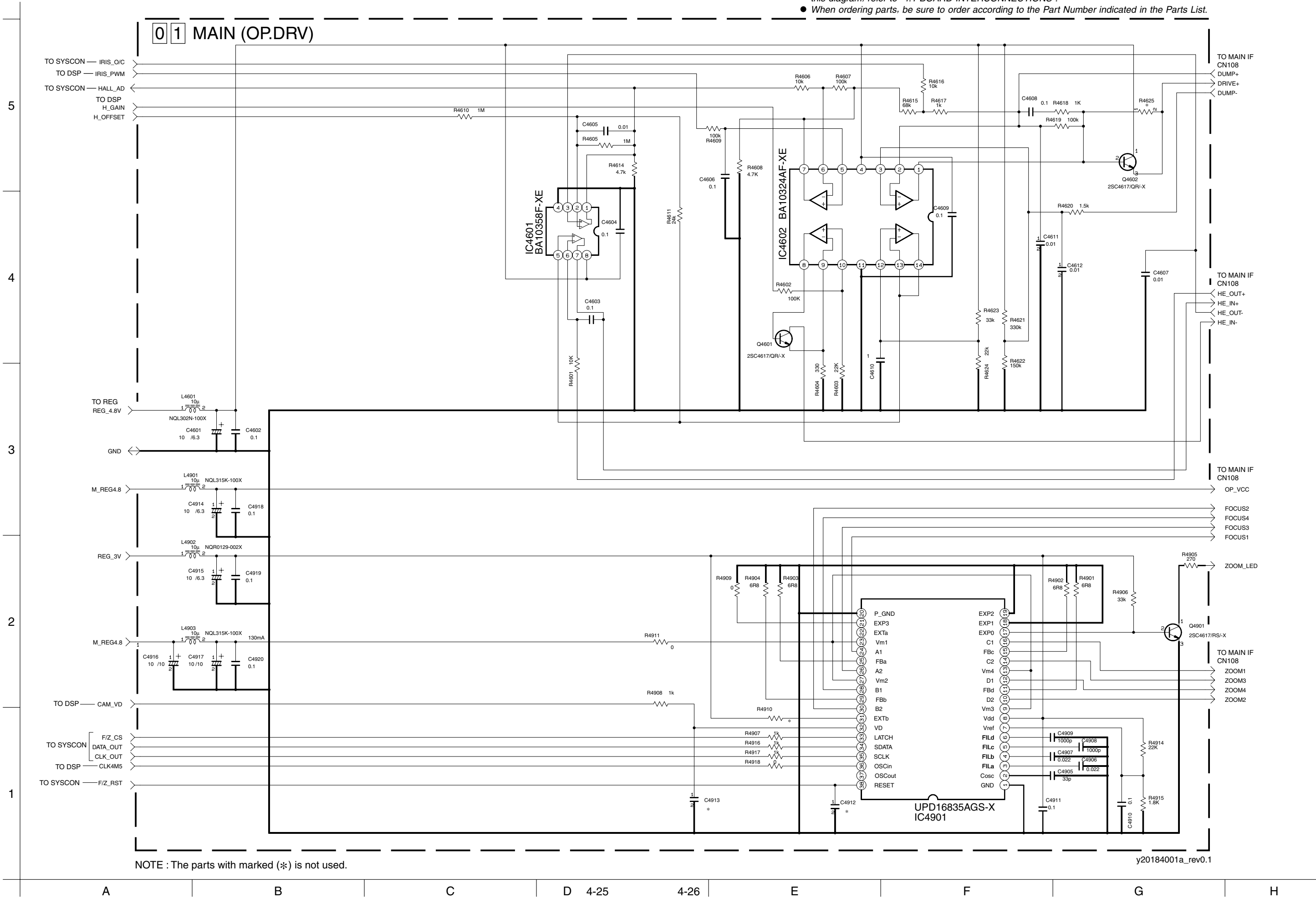
5
4
3
2
1

The schematic diagram illustrates the internal circuitry of the LCD module. It features three PUMX1-W transistors (Q4304, Q4305, Q4306) used for signal processing. The central component is the IC4305 (TC7W53FU-X), which is connected to the LCD panel's data and control lines. The circuit is powered by three voltage rails: REG_4.8V, REG_2.5V, and REG_3V. It also includes a ground connection (GND) and a connection to the main system (TO REG). Various passive components, including resistors (R4360, R4361, R4362, R4363, R4365, R4366, R4367, R4368, R4369, R4370, R4371, R4372, R4373, R4374, R4375, R4376, R4377, R4378, R4379, R4380, R4381, R4382, R4383, R4384, R4385, R4386, R4387, R4388, R4389, R4390, R4391, R4392, R4393, R4394, R4395, R4396, R4397, R4398, R4399, R4400, R4401, R4402, R4403, R4404, R4405, R4406, R4407, R4408, R4409, R4410, R4411, R4412, R4413, R4414, R4415, R4416, R4417, R4418, R4419, R4420, R4421, R4422, R4423, R4424, R4425, R4426, R4427, R4428, R4429, R4430, R4431, R4432, R4433, R4434, R4435, R4436, R4437, R4438, R4439, R4440, R4441, R4442, R4443, R4444, R4445, R4446, R4447, R4448, R4449, R4450, R4451, R4452, R4453, R4454, R4455, R4456, R4457, R4458, R4459, R4460, R4461, R4462, R4463, R4464, R4465, R4466, R4467, R4468, R4469, R4470, R4471, R4472, R4473, R4474, R4475, R4476, R4477, R4478, R4479, R4480, R4481, R4482, R4483, R4484, R4485, R4486, R4487, R4488, R4489, R4490, R4491, R4492, R4493, R4494, R4495, R4496, R4497, R4498, R4499, R4500, R4501, R4502, R4503, R4504, R4505, R4506, R4507, R4508, R4509, R4510, R4511, R4512, R4513, R4514, R4515, R4516, R4517, R4518, R4519, R4520, R4521, R4522, R4523, R4524, R4525, R4526, R4527, R4528, R4529, R4530, R4531, R4532, R4533, R4534, R4535, R4536, R4537, R4538, R4539, R4540, R4541, R4542, R4543, R4544, R4545, R4546, R4547, R4548, R4549, R4550, R4551, R4552, R4553, R4554, R4555, R4556, R4557, R4558, R4559, R4560, R4561, R4562, R4563, R4564, R4565, R4566, R4567, R4568, R4569, R4570, R4571, R4572, R4573, R4574, R4575, R4576, R4577, R4578, R4579, R4580, R4581, R4582, R4583, R4584, R4585, R4586, R4587, R4588, R4589, R4590, R4591, R4592, R4593, R4594, R4595, R4596, R4597, R4598, R4599, R4600, R4601, R4602, R4603, R4604, R4605, R4606, R4607, R4608, R4609, R4610, R4611, R4612, R4613, R4614, R4615, R4616, R4617, R4618, R4619, R4620, R4621, R4622, R4623, R4624, R4625, R4626, R4627, R4628, R4629, R4630, R4631, R4632, R4633, R4634, R4635, R4636, R4637, R4638, R4639, R4640, R4641, R4642, R4643, R4644, R4645, R4646, R4647, R4648, R4649, R4650, R4651, R4652, R4653, R4654, R4655, R4656, R4657, R4658, R4659, R4660, R4661, R4662, R4663, R4664, R4665, R4666, R4667, R4668, R4669, R4670, R4671, R4672, R4673, R4674, R4675, R4676, R4677, R4678, R4679, R4680, R4681, R4682, R4683, R4684, R4685, R4686, R4687, R4688, R4689, R4690, R4691, R4692, R4693, R4694, R4695, R4696, R4697, R4698, R4699, R4700, R4701, R4702, R4703, R4704, R4705, R4706, R4707, R4708, R4709, R4710, R4711, R4712, R4713, R4714, R4715, R4716, R4717, R4718, R4719, R4720, R4721, R4722, R4723, R4724, R4725, R4726, R4727, R4728, R4729, R4730, R4731, R4732, R4733, R4734, R4735, R4736, R4737, R4738, R4739, R4740, R4741, R4742, R4743, R4744, R4745, R4746, R4747, R4748, R4749, R4750, R4751, R4752, R4753, R4754, R4755, R4756, R4757, R4758, R4759, R4760, R4761, R4762, R4763, R4764, R4765, R4766, R4767, R4768, R4769, R4770, R4771, R4772, R4773, R4774, R4775, R4776, R4777, R4778, R4779, R4780, R4781, R4782, R4783, R4784, R4785, R4786, R4787, R4788, R4789, R4790, R4791, R4792, R4793, R4794, R4795, R4796, R4797, R4798, R4799, R4800, R4801, R4802, R4803, R4804, R4805, R4806, R4807, R4808, R4809, R4810, R4811, R4812, R4813, R4814, R4815, R4816, R4817, R4818, R4819, R4820, R4821, R4822, R4823, R4824, R4825, R4826, R4827, R4828, R4829, R4830, R4831, R4832, R4833, R4834, R4835, R4836, R4837, R4838, R4839, R4840, R4841, R4842, R4843, R4844, R4845, R4846, R4847, R4848, R4849, R4850, R4851, R4852, R4853, R4854, R4855, R4856, R4857, R4858, R4859, R4860, R4861, R4862, R4863, R4864, R4865, R4866, R4867, R4868, R4869, R4870, R4871, R4872, R4873, R4874, R4875, R4876, R4877, R4878, R4879, R4880, R4881, R4882, R4883, R4884, R4885, R4886, R4887, R4888, R4889, R4890, R4891, R4892, R4893, R4894, R4895, R4896, R4897, R4898, R4899, R4900, R4901, R4902, R4903, R4904, R4905, R4906, R4907, R4908, R4909, R4910, R4911, R4912, R4913, R4914, R4915, R4916, R4917, R4918, R4919, R4920, R4921, R4922, R4923, R4924, R4925, R4926, R4927, R4928, R4929, R4930, R4931, R4932, R4933, R4934, R4935, R4936, R4937, R4938, R4939, R4940, R4941, R4942, R4943, R4944, R4945, R4946, R4947, R4948, R4949, R4950, R4951, R4952, R4953, R4954, R4955, R4956, R4957, R4958, R4959, R4960, R4961, R4962, R4963, R4964, R4965, R4966, R4967, R4968, R4969, R4970, R4971, R4972, R4973, R4974, R4975, R4976, R4977, R4978, R4979, R4980, R4981, R4982, R4983, R4984, R4985, R4986, R4987, R4988, R4989, R4990, R4991, R4992, R4993, R4994, R4995, R4996, R4997, R4998, R4999, R5000, R5001, R5002, R5003, R5004, R5005, R5006, R5007, R5008, R5009, R50

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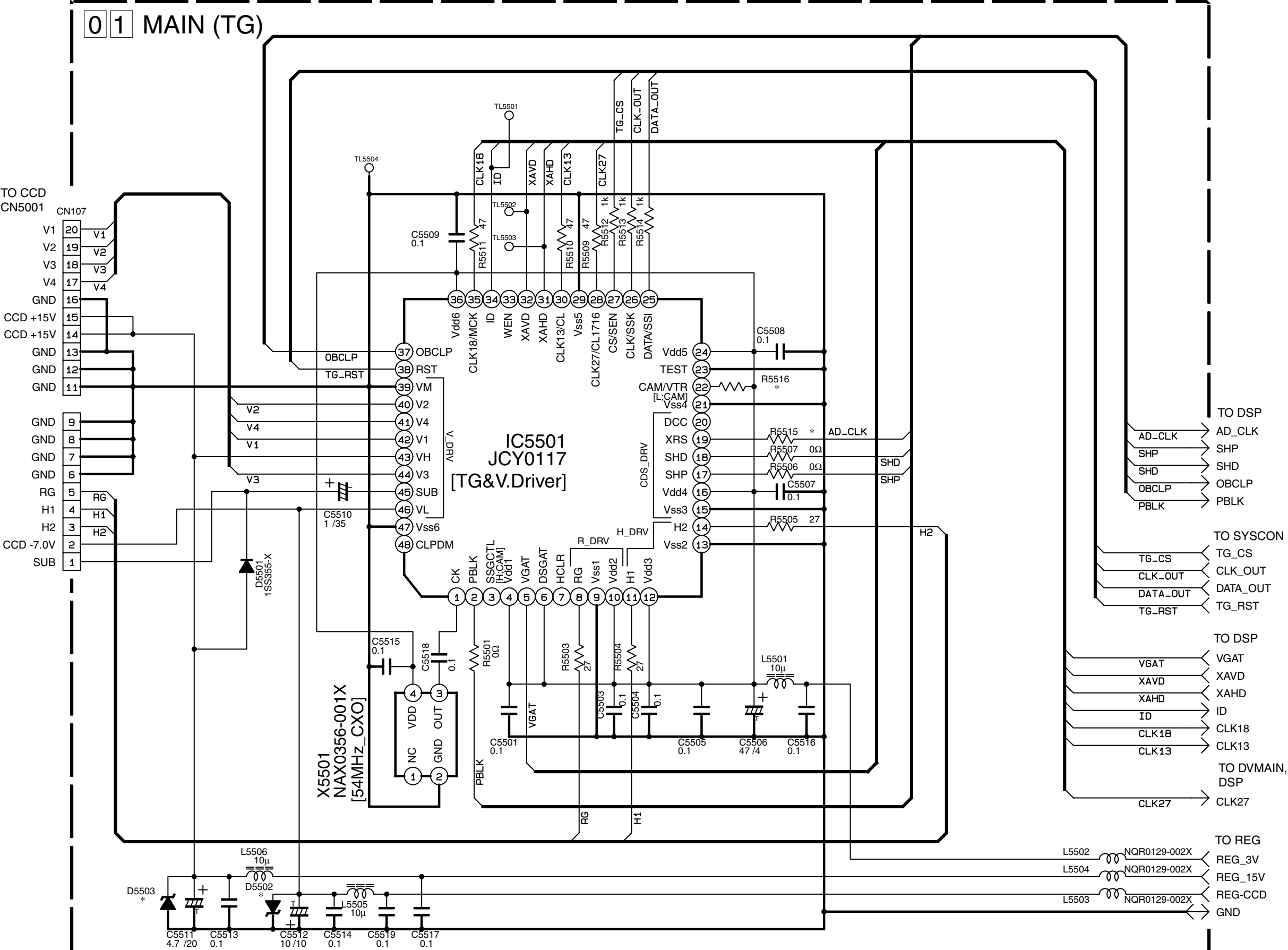
4.12 OP.DRV SCHEMATIC DIAGRAM

NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



4.13 TG SCHEMATIC DIAGRAM

NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

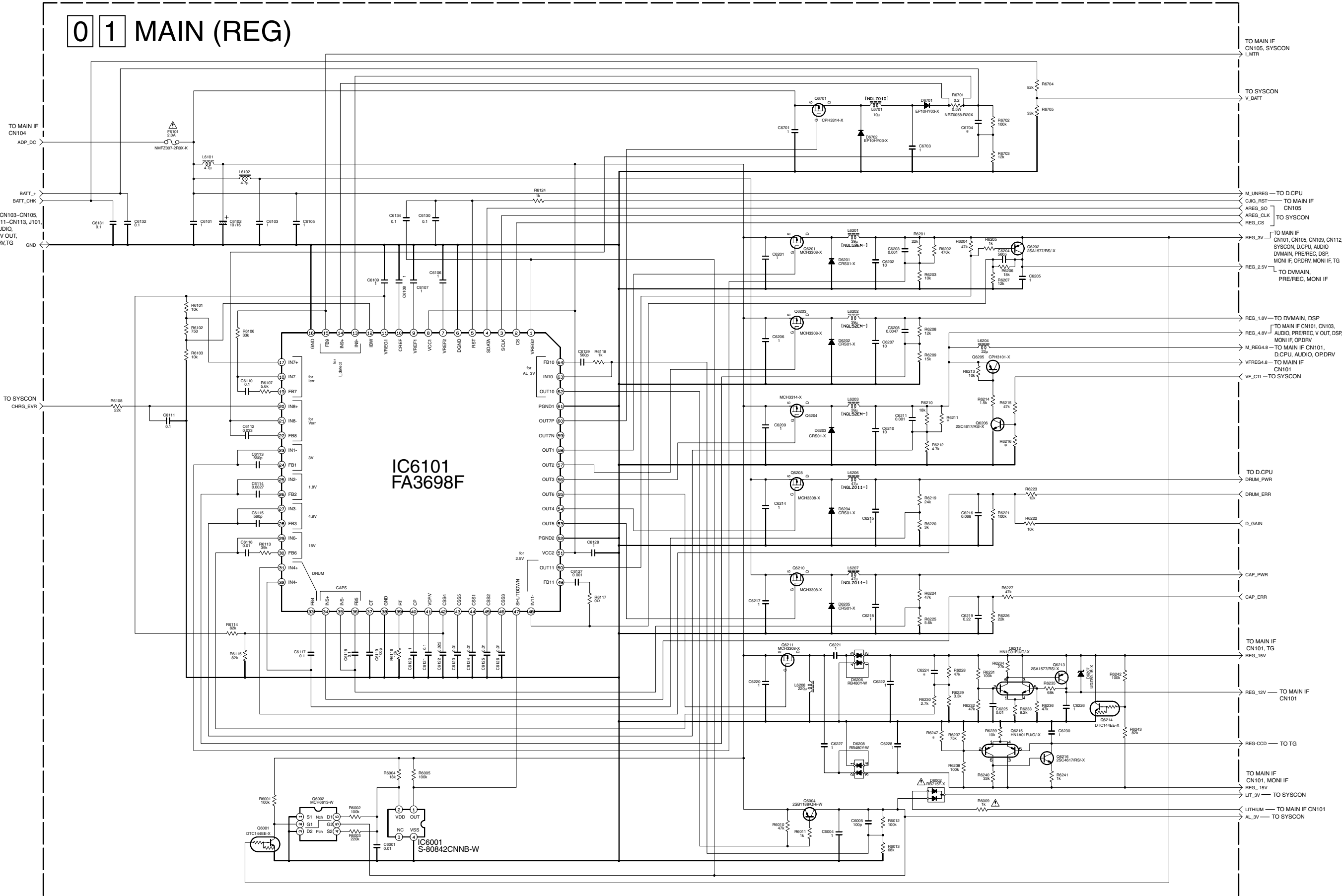


NOTE : The parts with marked (*) is not used.

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4.14 REG SCHEMATIC DIAGRAM

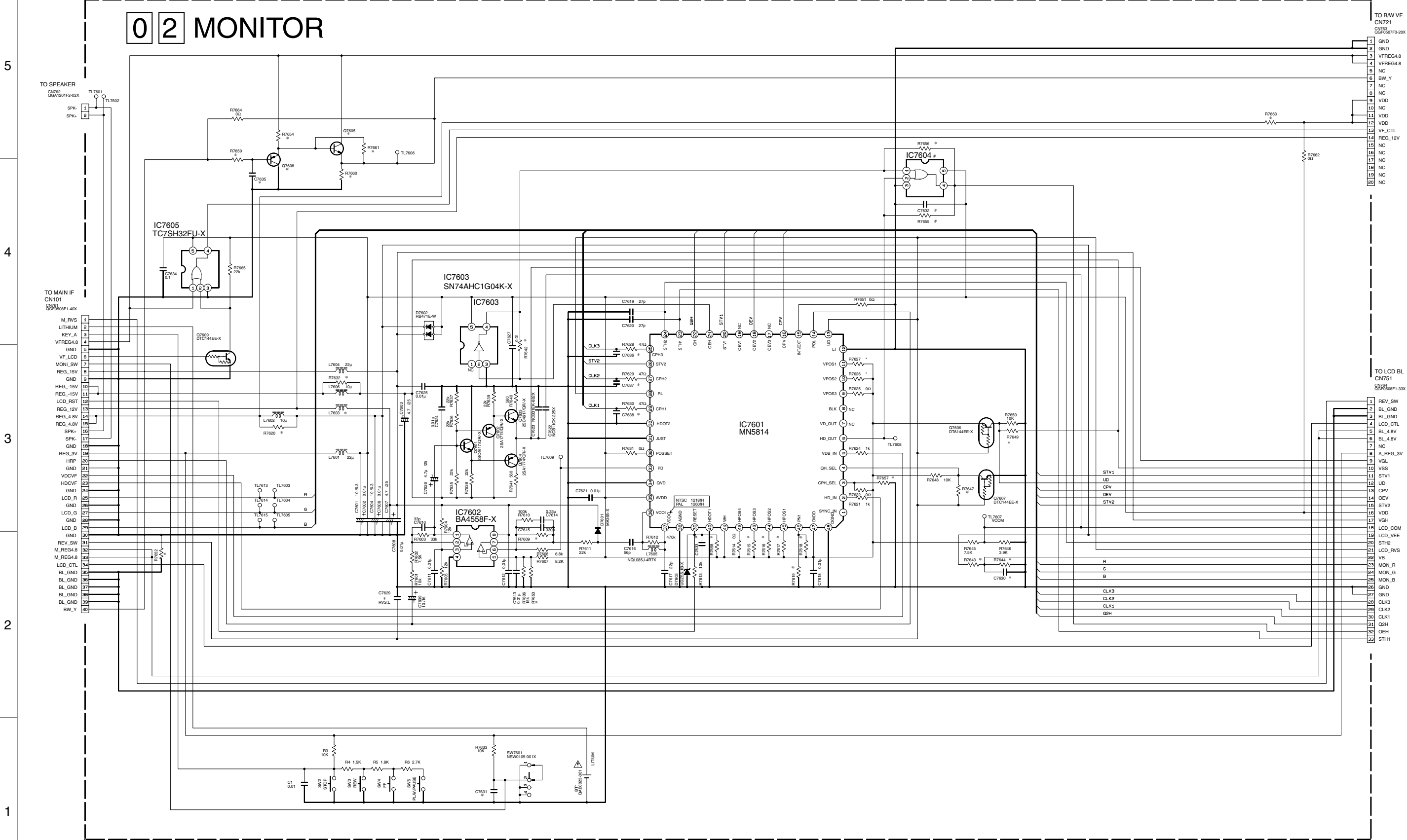
- NOTES :
- For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
 - When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



y10271001a_rev0

4.15 MONITOR SCHEMATIC DIAGRAM

NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



NOTE : The parts with marked (*) is not used.

y10272001a_rev0

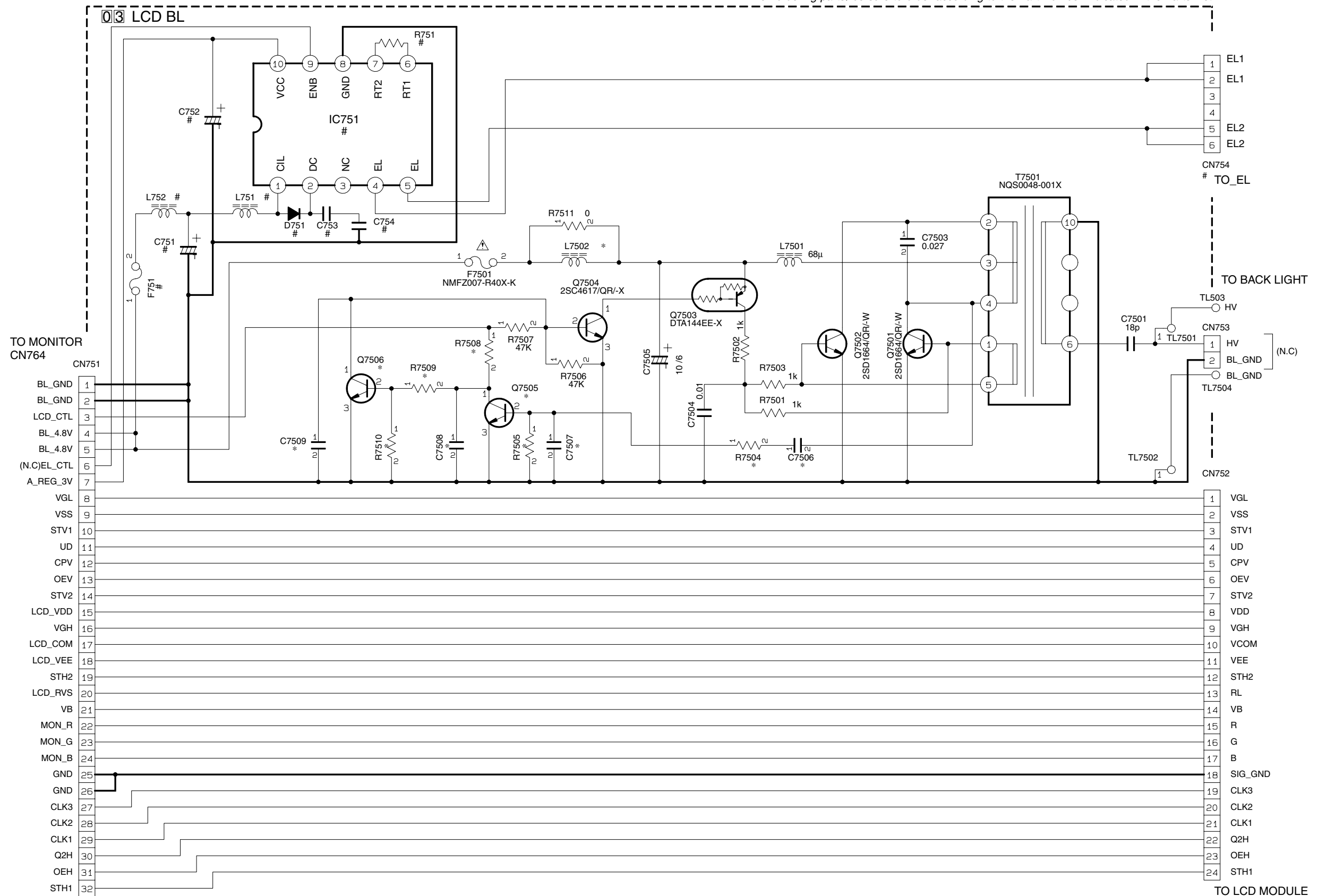
: Exchange Parts List

	R7618	R7619	R7655	IC7604	C7632
NTSC	*	0	0	*	*
PAL	0	*	*	TC7SH32FU-X	0.1

4.16 LCD BL SCHEMATIC DIAGRAM

NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".

● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



NOTE : The parts with marked (*) is not used.

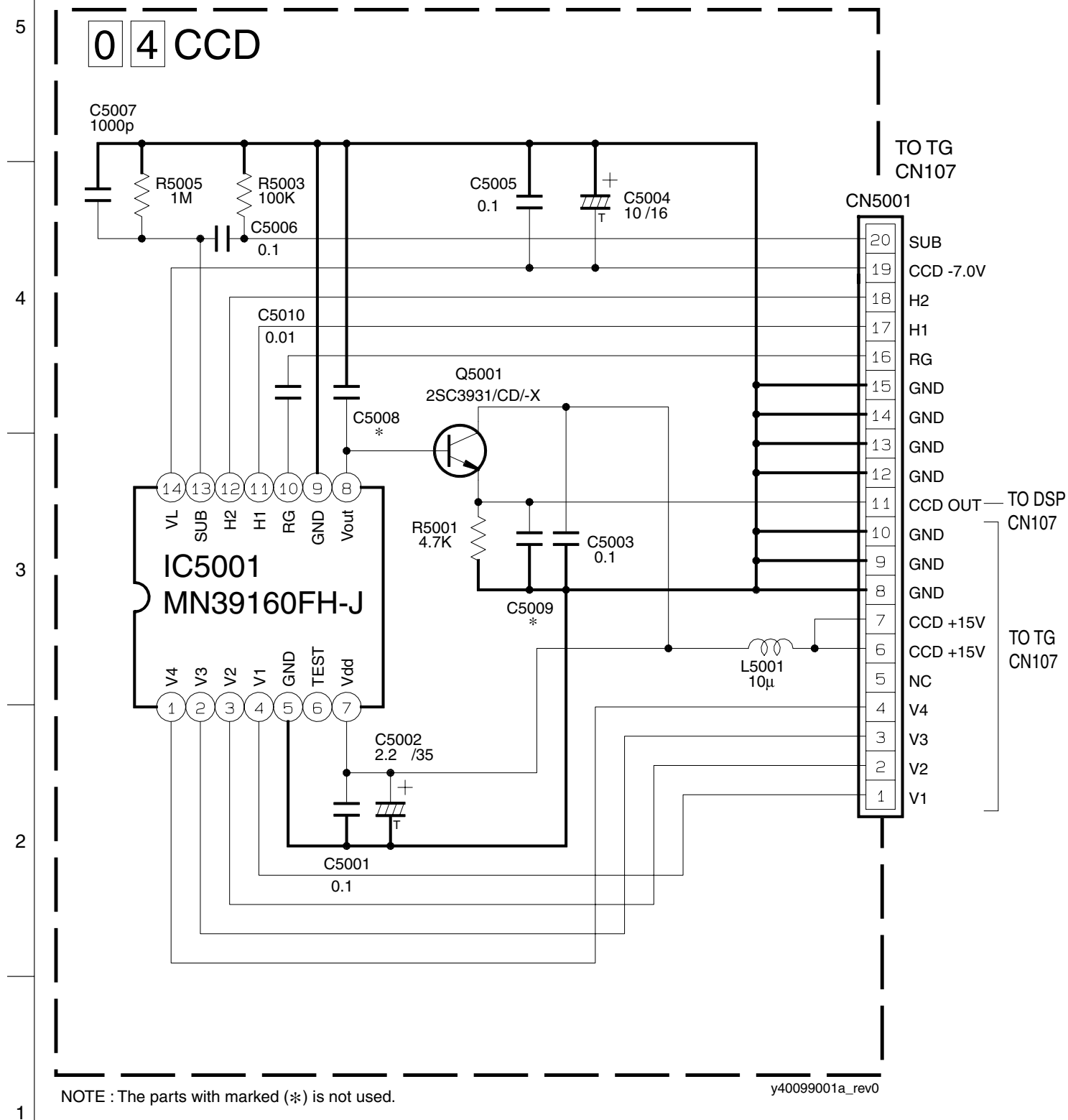
Exchange Prats List

[illegible]

y30162001a_rev0

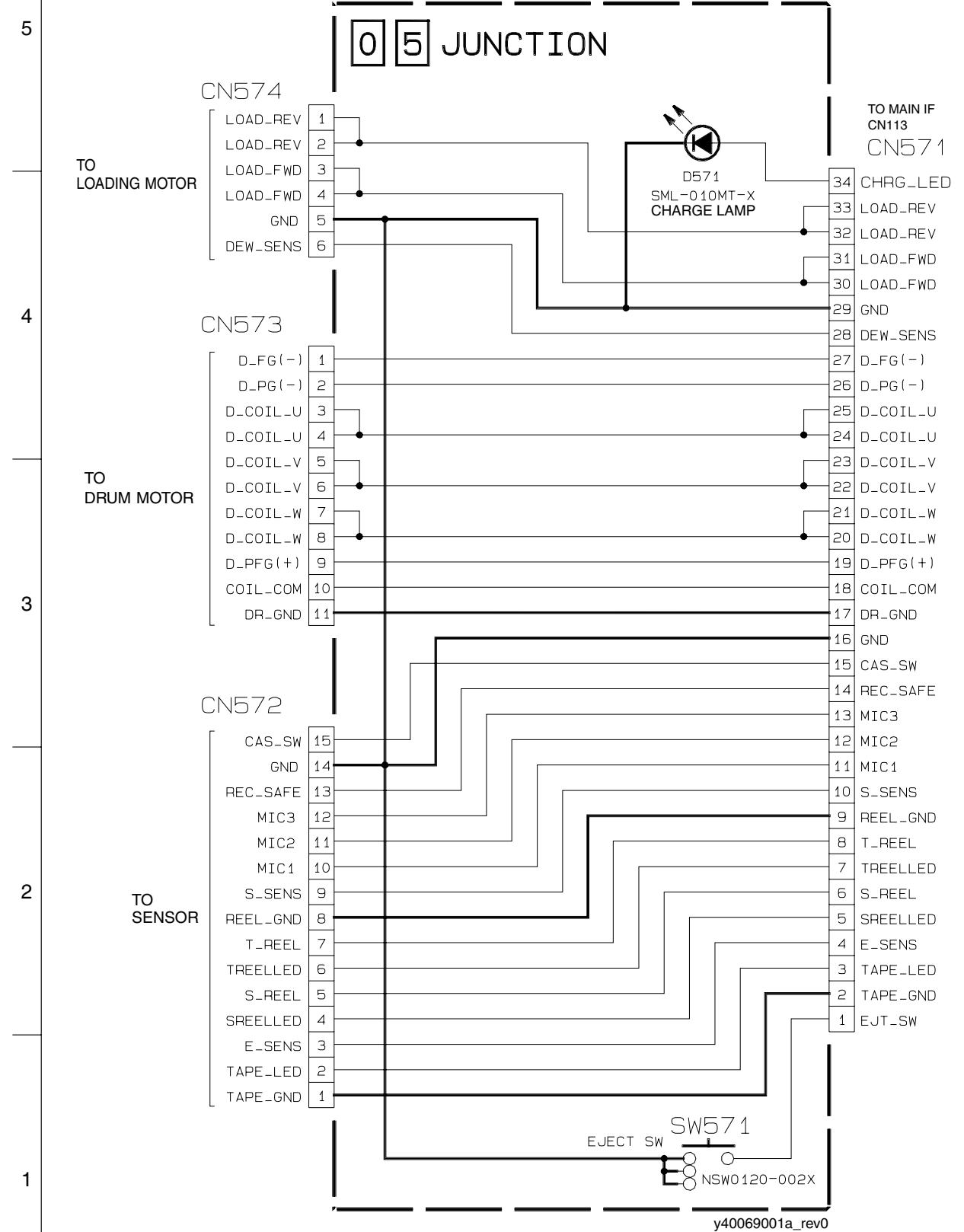
4.17 CCD SCHEMATIC DIAGRAM

- NOTES :
- For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
 - When ordering parts, be sure to order according to the Part Number indicated in the Parts List.
 - IC5001 is incorporated in the CCD base assembly. When IC5001 needs replacement, replace the CCD base assembly in whole because it cannot be re-placed alone.



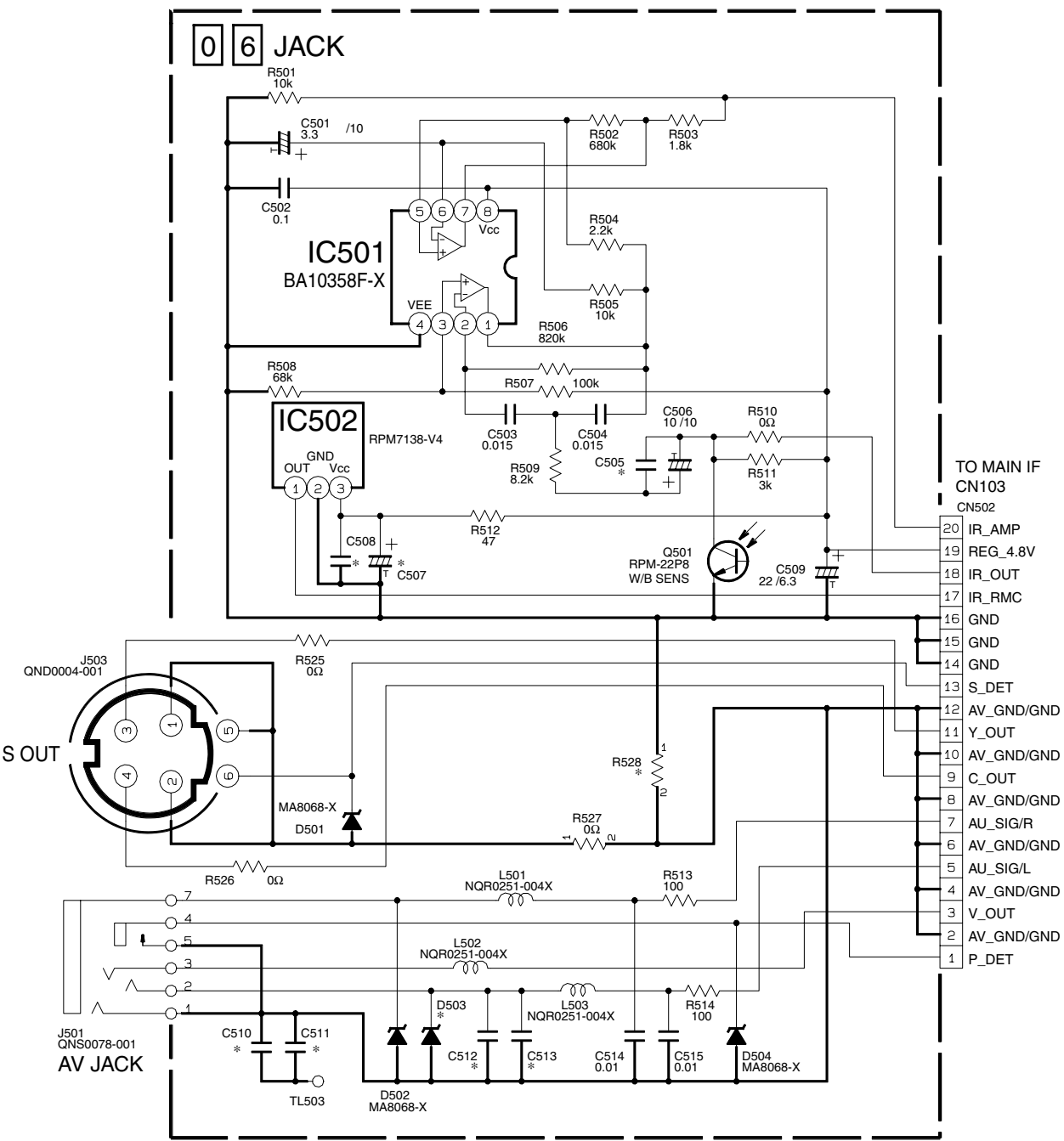
4.18 JUNCTION SCHEMATIC DIAGRAM

- NOTES :
- For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
 - When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



4.19 JACK SCHEMATIC DIAGRAM

- NOTES :
- For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
 - When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

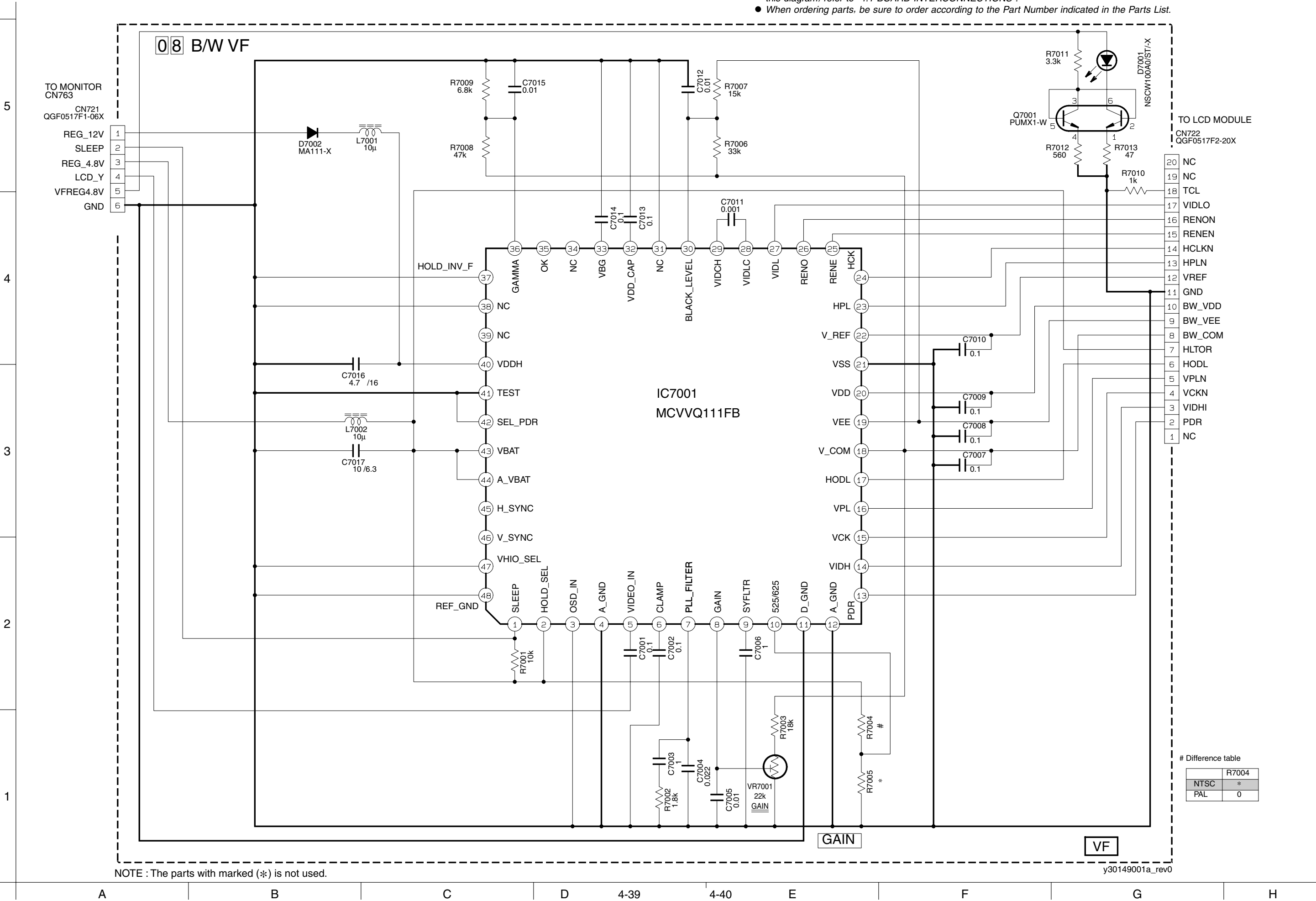


NOTE : The parts with marked (*) is not used.

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4.20 B/W VF SCHEMATIC DIAGRAM

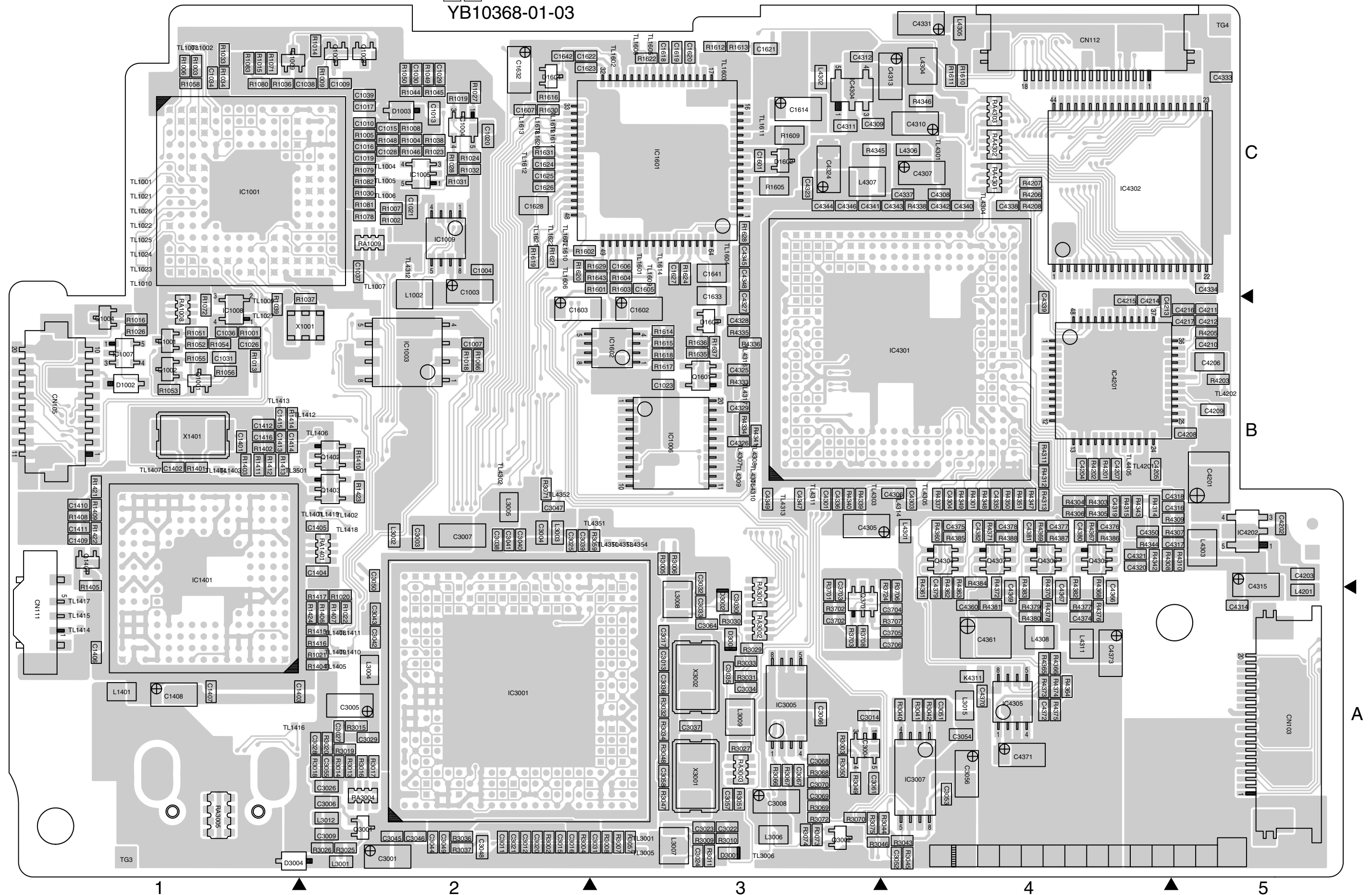
NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



4.21 MAIN CIRCUIT BOARD

FOIL SIDE (B)

01 MAIN PWB
YB10368-01-03



COMPONENT PARTS LOCATION GUIDE <MAIN/YB10368-01-03>

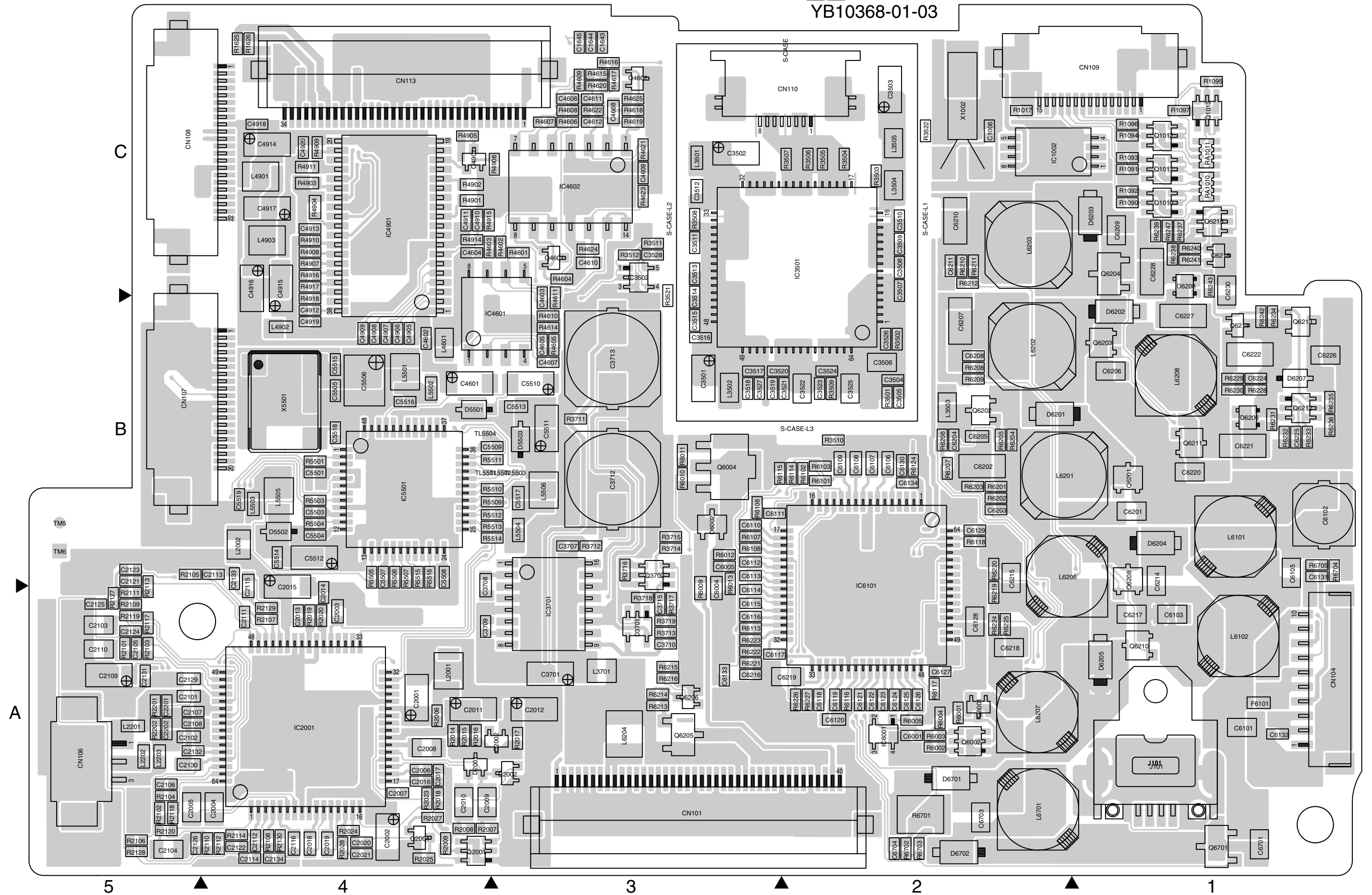
(1/2)

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR		C2015	A C 4A	C3049	B C 2A	C4308	B C 4C	C4916	A C 4C	C6226	A C 1B	IC4901	A C 4C		
C1003	B C 2C	C2016	A C 4A	C3050	B C 2B	C4309	B C 3C	C4917	A C 4C	C6227	A C 1B	IC5501	A C 4B		
C1004	B C 2C	C2017	A C 4A	C3051	B C 4A	C4310	B C 4C	C4918	A C 4C	C6228	A C 1C	IC6001	A C 2A		
C1006	A C 2C	C2018	A C 4A	C3052	B C 4A	C4311	B C 3C	C4919	A C 4B	C6230	A C 1C	IC6101	A C 2B		
C1007	B C 2B	C2019	A C 4A	C3053	B C 4A	C4312	B C 3C	C4920	A C 4C	C6701	A C 1A	COIL			
C1009	B C 2C	C2020	A C 4A	C3054	B C 4A	C4313	B C 4C	C5501	A C 4B	C6703	A C 2A	L1002	B C 2C		
C1010	B C 2C	C2021	A C 4A	C3055	B C 2A	C4314	B C 5A	C5503	A C 4B	C6704	A C 2A	L1401	B C 1A		
C1013	B C 2C	C2101	A C 5A	C3056	B C 4A	C4315	B C 5B	C5504	A C 4B	CONNECTOR				L1401	B C 1A
C1015	B C 2C	C2102	A C 5A	C3057	B C 3A	C4316	B C 5B	C5505	A C 4B	CN101	A C 3A	L2001	A C 4A		
C1016	B C 2C	C2103	A C 5A	C3058	B C 3A	C4317	B C 5B	C5506	A C 4B	CN103	B C 5A	L2002	A C 4B		
C1017	B C 2C	C2104	A C 5A	C3061	B C 3A	C4318	B C 5B	C5507	A C 4B	CN104	A C 1A	L2201	A C 5A		
C1019	B C 2C	C2105	A C 5A	C3064	B C 3A	C4319	B C 4B	C5508	A C 4B	CN105	B C 1B	L2202	A C 5A		
C1020	B C 2C	C2106	A C 5A	C3066	B C 3A	C4320	B C 4B	C5509	A C 3B	CN106	A C 5A	L2203	A C 5A		
C1021	B C 2C	C2107	A C 5A	C3067	B C 3A	C4321	B C 4B	C5510	A C 3B	CN107	A C 4B	L3001	B C 2A		
C1023	B C 3B	C2108	A C 5A	C3068	B C 3A	C4323	B C 3C	C5511	A C 3B	CN108	A C 4C	L3002	B C 2B		
C1026	B C 1B	C2109	A C 5A	C3069	B C 3A	C4324	B C 3C	C5512	A C 4B	CN109	A C 1C	L3003	B C 2B		
C1028	B C 2C	C2110	A C 5A	C3070	B C 3A	C4325	B C 3B	C5513	A C 3B	CN110	A C 2C	L3004	B C 2A		
C1029	B C 2C	C2111	A C 4A	C3501	A C 3B	C4326	B C 3B	C5514	A C 4B	CN111	B C 1A	L3005	B C 2B		
C1030	B C 2C	C2112	A C 4A	C3502	A C 3C	C4327	B C 3B	C5515	A C 4B	CN112	B C 4C	L3006	B C 3A		
C1031	B C 1B	C2113	A C 4B	C3503	A C 2C	C4328	B C 3B	C5516	A C 4B	CN113	A C 3C	L3007	B C 3A		
C1034	B C 1C	C2114	A C 4A	C3504	A C 2B	C4329	B C 3B	C5517	A C 3B	DIODE				L3008	B C 3A
C1036	B C 1B	C2115	A C 4A	C3505	A C 2B	C4331	B C 4C	C5518	A C 4B	D1001	B C 1B	L3009	B C 3A		
C1037	B C 2C	C2116	A C 4A	C3506	A C 2B	C4333	B C 5C	C5519	A C 4B	D1002	B C 1B	L3012	B C 2A		
C1038	B C 2C	C2121	A C 5B	C3507	A C 2C	C4334	B C 5C	C6001	A C 2A	D1003	B C 2C	L3015	B C 4A		
C1039	B C 2C	C2122	A C 4A	C3508	A C 2C	C4335	B C 4B	C6004	A C 3A	D1602	B C 3C	L3501	A C 3C		
C1401	B C 1B	C2123	A C 5B	C3509	A C 2C	C4336	B C 3B	C6005	A C 3B	D1603	B C 3B	L3502	A C 3B		
C1402	B C 1B	C2124	A C 5A	C3510	A C 2C	C4337	B C 4C	C6101	A C 1A	D1604	B C 2C	L3503	A C 2B		
C1403	B C 2A	C2125	A C 5A	C3511	A C 3C	C4338	B C 4C	C6102	A C 1B	D2001	A C 4A	L3504	A C 2C		
C1404	B C 2B	C2126	A C 5A	C3512	A C 3C	C4339	B C 4B	C6103	A C 1A	D2002	A C 3A	L3505	A C 2C		
C1405	B C 2B	C2129	A C 5A	C3513	A C 3C	C4340	B C 4C	C6105	A C 1B	D3001	B C 3A	L3701	A C 3A		
C1406	B C 1A	C2130	A C 5A	C3514	A C 3B	C4341	B C 3C	C6106	A C 2B	D3002	B C 3A	L4201	B C 5A		
C1407	B C 1A	C2131	A C 5A	C3515	A C 3B	C4342	B C 4C	C6107	A C 2B	D3003	B C 3A	L4301	B C 4B		
C1408	B C 1A	C2132	A C 5A	C3516	A C 3B	C4343	B C 4C	C6108	A C 2B	D3004	B C 1A	L4302	B C 3C		
C1409	B C 1B	C2133	A C 4B	C3517	A C 3B	C4344	B C 3C	C6109	A C 2B	D3701	A C 3A	L4303	B C 5B		
C1410	B C 1B	C2134	A C 4A	C3518	A C 3B	C4345	B C 3C	C6110	A C 3B	D5501	A C 4B	L4304	B C 4C		
C1411	B C 1B	C2201	A C 5A	C3519	A C 3B	C4346	B C 3C	C6111	A C 3B	D5502	A C 4B	L4305	B C 4C		
C1412	B C 1B	C2202	A C 5A	C3520	A C 3B	C4347	B C 3C	C6112	A C 3B	D5503	A C 3B	L4306	B C 4C		
C1413	B C 1B	C3001	B C 2B	C3521	A C 2B	C4348	B C 3C	C6113	A C 3B	D6002	A C 3B	L4307	B C 3C		
C1414	B C 1B	C3003	B C 2B	C3522	A C 2B	C4349	B C 3B	C6114	A C 3A	D6201	A C 2B	L4308	B C 4A		
C1415	B C 1B	C3004	B C 2B	C3523	A C 2B	C4350	B C 4B	C6115	A C 3A	D6202	A C 1B	L4311	B C 4A		
C1416	B C 1B	C3005	B C 2A	C3524	A C 2B	C4360	B C 4A	C6116	A C 3A	D6203	A C 1C	L4601	A C 4B		
C1601	B C 3C	C3006	B C 2A	C3525	A C 2B	C4361	B C 4A	C6117	A C 3A	D6204	A C 1B	L4901	A C 4C		
C1602	B C 3B	C3007	B C 2B	C3526	A C 2B	C4366	B C 4A	C6118	A C 2A	D6205	A C 1A	L4902	A C 4B		
C1603	B C 2B	C3008	B C 3A	C3527	A C 3B	C4367	B C 4A	C6119	A C 2A	D6206	A C 1B	L4903	A C 4C		
C1605	B C 3C	C3009	B C 2A	C3528	A C 3C	C4369	B C 4A	C6120	A C 2A	D6207	A C 1B	L5501	A C 4B		
C1606	B C 3C	C3011	B C 2A	C3701	A C 3A	C4370	B C 4A	C6121	A C 2A	D6208	A C 1C	L5502	A C 4B		
C1607	B C 2C	C3012	B C 2A	C3702	B C 3A	C4371	B C 4A	C6122	A C 2A	D6701	A C 2A	L5503	A C 4B		
C1614	B C 3C	C3013	B C 3A	C3703	B C 3A	C4372	B C 4A	C6123	A C 2A	D6702	A C 2A	L5504	A C 3B		
C1618	B C 3C	C3014	B C 3A	C3704	B C 4A	C4373	B C 4A	C6124	A C 2A	FUSE				L5505	A C 4B
C1619	B C 3C	C3015	B C 2A	C3705	B C 4A	C4374	B C 4A	C6125	A C 2A	F6101	A C 1A	L5506	A C 3B		
C1620	B C 3C	C3016	B C 2A	C3706	B C 4A	C4375	B C 4B	C6126	A C 2A	IC				L6101	A C 1B
C1621	B C 3C	C3017	B C 3A	C3707	A C 3B	C4376	B C 4B	C6127	A C 2A	IC1001	B C 1C	L6102	A C 1A		
C1622	B C 2C	C3020	B C 2A	C3708	A C 4B	C4377	B C 4B	C6128	A C 2A	IC1002	A C 2C	L6201	A C 2B		
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C1625	B C 2C	C3023	B C 3A	C3712	A C 3B	C4380	B C 4B	C6131	A C 1B	IC1005	B C 2C	L6204	A C 3A		
C1626	B C 2C	C3024	B C 3A	C3713	A C 3B	C4381	B C 4B	C6132	A C 1A	IC1006	B C 3B	L6206	A C 2B		
C1627	B C 3C	C3025	B C 2B	C3715	A C 3A	C4382	B C 4B	C6133	A C 3A	IC1007	B C 1B	L6207	A C 2A		
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C1632	B C 2C	C3027	B C 2A	C4202	B C 5B	C4602	A C 4B	C6201	A C 1B	TRANSISTOR				Q1001	B C 1B
C1633	B C 3C	C3028	B C 2A	C4203	B C 5B	C4603	A C 3B	C6202	A C 2B	IC1009	B C 2C	Q1002	B C 1B		
C1641	B C 3C	C3029	B C 2A	C4204	B C 4B	C4604	A C 4C	C6203	A C 2B	IC1401	B C 1B	Q1004	B C 1B		
C1642	B C 2C	C3030	B C 3A	C4205	B C 4B	C4605	A C 3B	C6204	A C 2B	IC1601	B C 3C	Q1005	B C 2C		
C1643	A C 3C	C3031	B C 3A	C4206	B C 5B	C4606	A C 3C	C6205	A C 2B	IC1602	B C 3B	Q1008	B C 2C		
C1644	A C 3C	C3032	B C 3B	C4207	B C 4B	C4607	A C 3B	C6206	A C 1B	IC2001	A C 4A	Q1009	B C 1C		
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C2002	A C 4A	C3035	B C 3A	C4210	B C 5B	C4610	A C 3C	C6209	A C 2C	IC3501	A C 2C	Q1012	A C 1C		
C2003	A C 4A	C3036	B C 3A	C4211	B C 5B	C4611	A C 3C	C6210	A C 1B	IC3502	A C 3C	Q1013	A C 1C		
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C2006	A C 4A	C3039	B C 2B	C4214	B C 4B	C4906	A C 4B	C6215	A C 3A	IC4202	B C 5B	Q1403	B C 2B		
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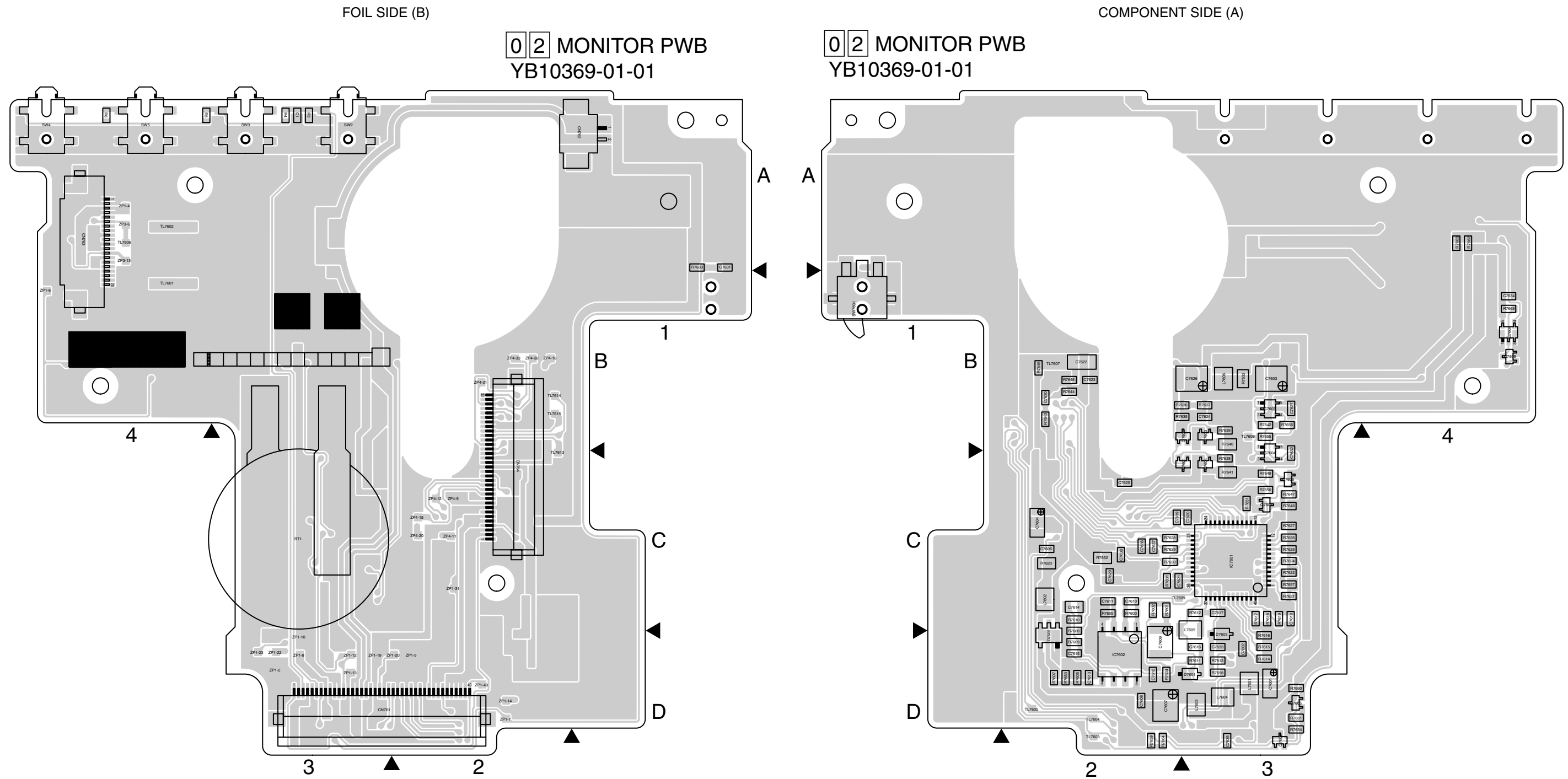
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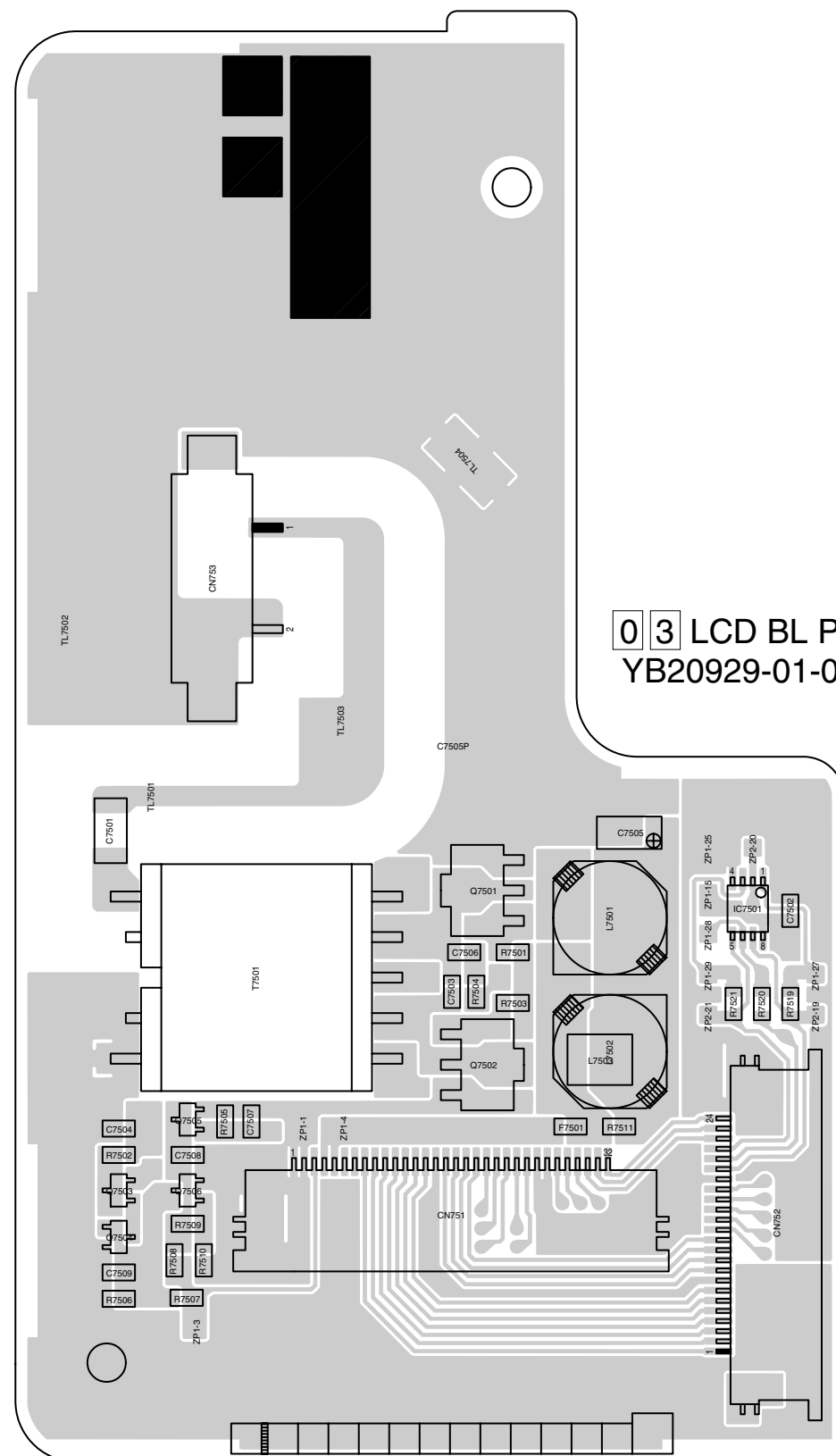
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Q4306	B	C	4B	R1091	A	C	1C	R2108	A	C	4A	R3512	A	C	3C	R4382	B	C	4A	R6118	A	C	2B	TL1027	B	C	1B
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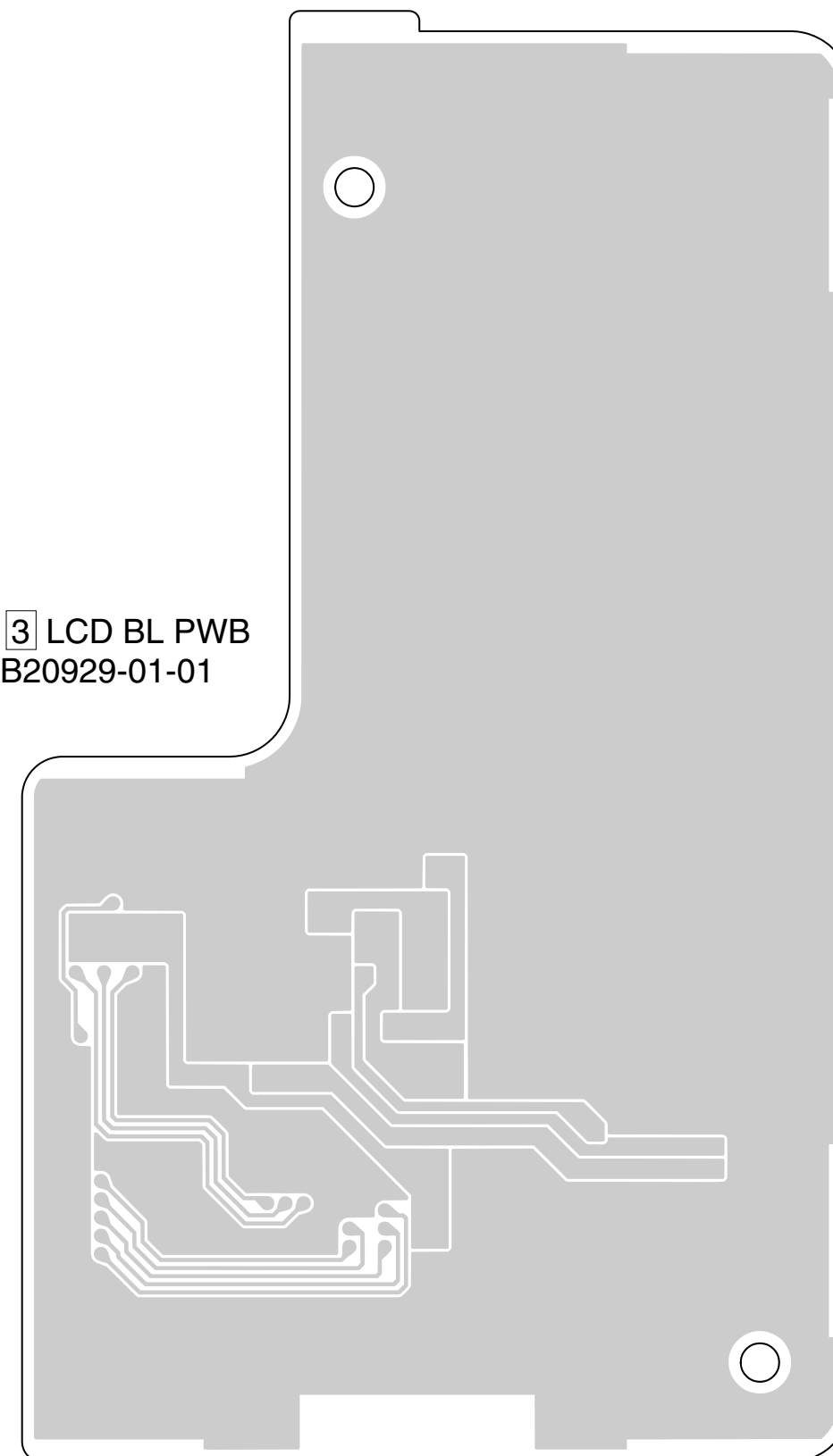
4.22 MONITOR CIRCUIT BOARD



FOIL SIDE (B)



COMPONENT SIDE (A)

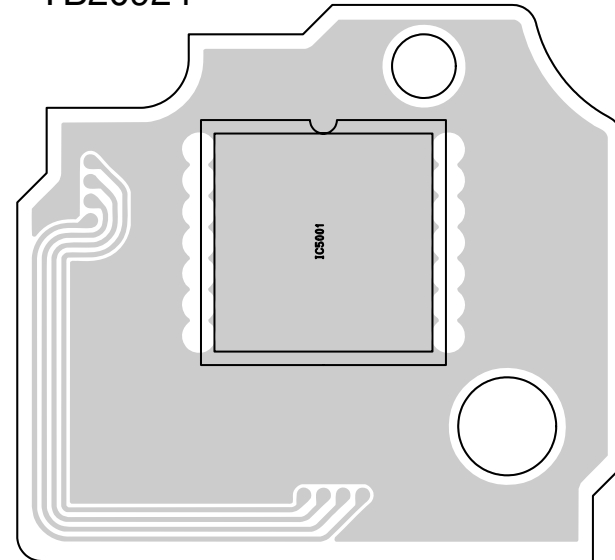


4.24 CCD, VF AND JUNCTION CIRCUIT BOARDS

- CCD -

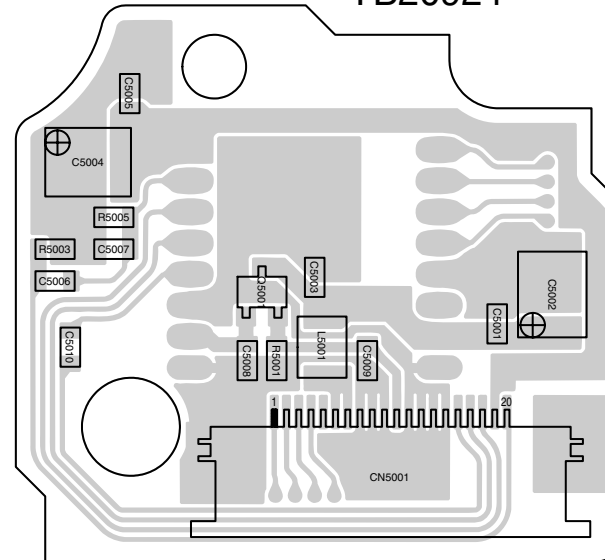
FOIL SIDE (B)

04 CCD PWB
YB20924



COMPONENT SIDE (A)

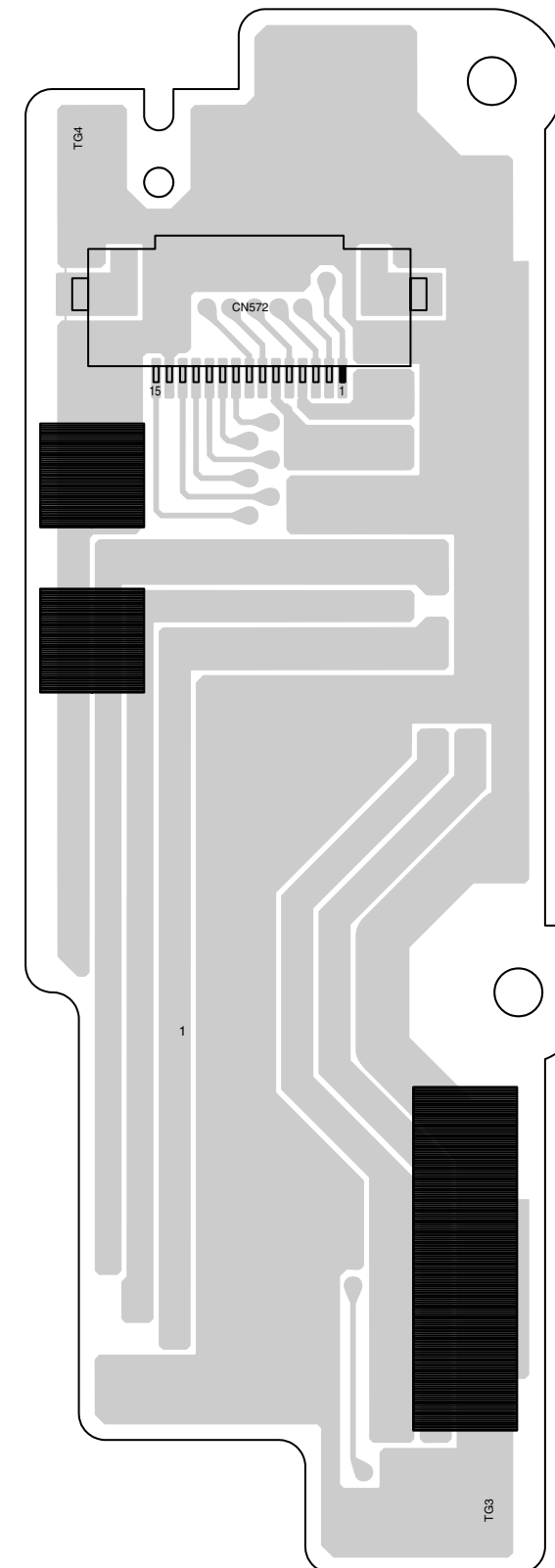
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YB20924



- JUNCTION -

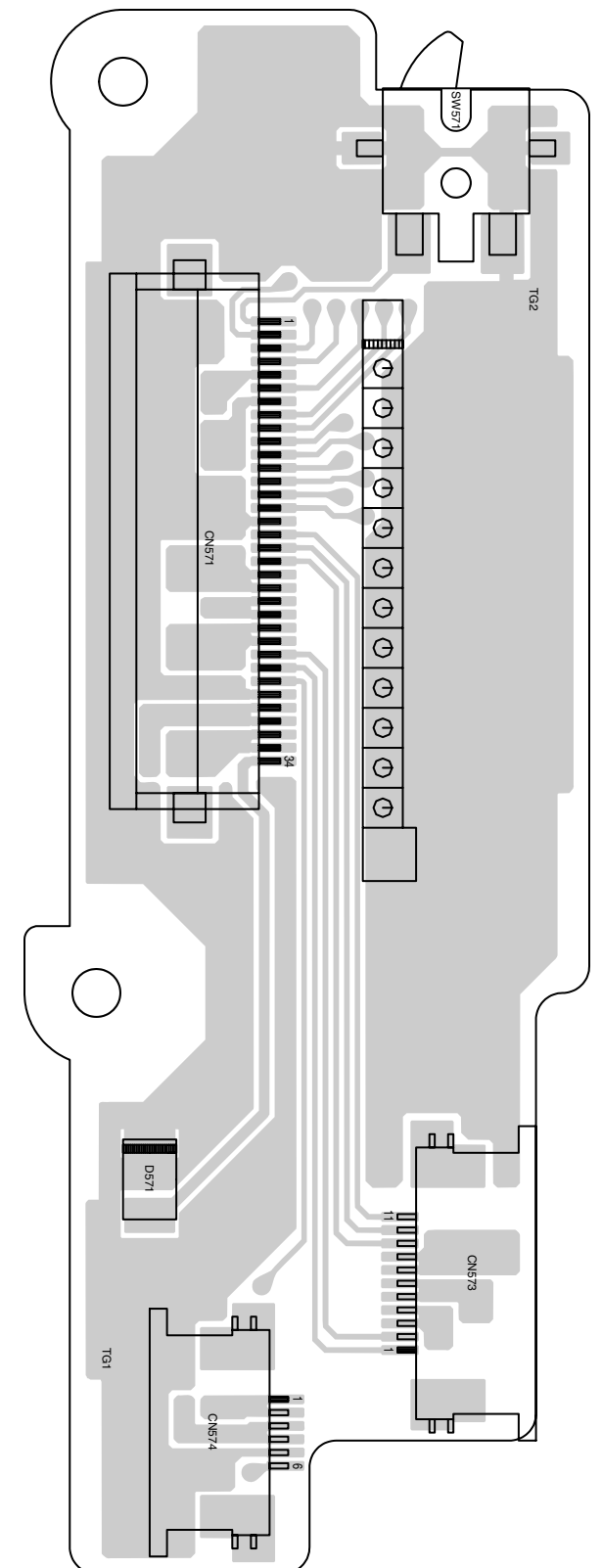
FOIL SIDE (B)

05 JUNCTION PWB
YB20925-01-01



COMPONENT SIDE (A)

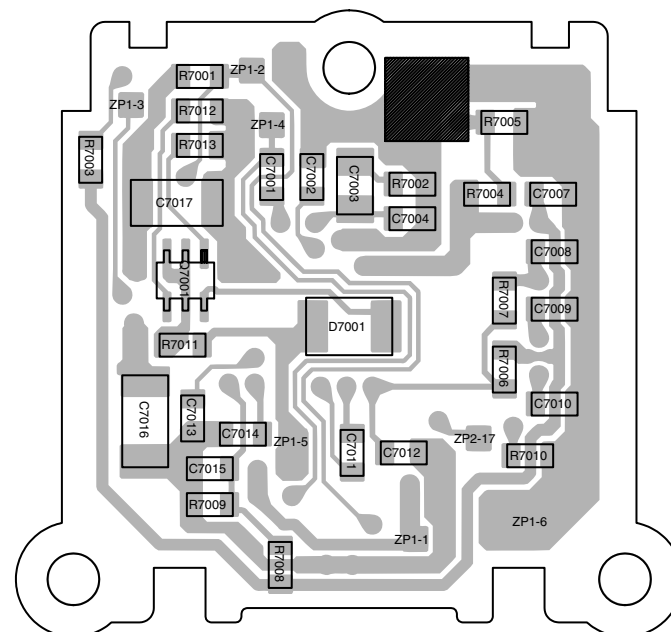
05 JUNCTION PWB
YB20925-01-01



- VF -

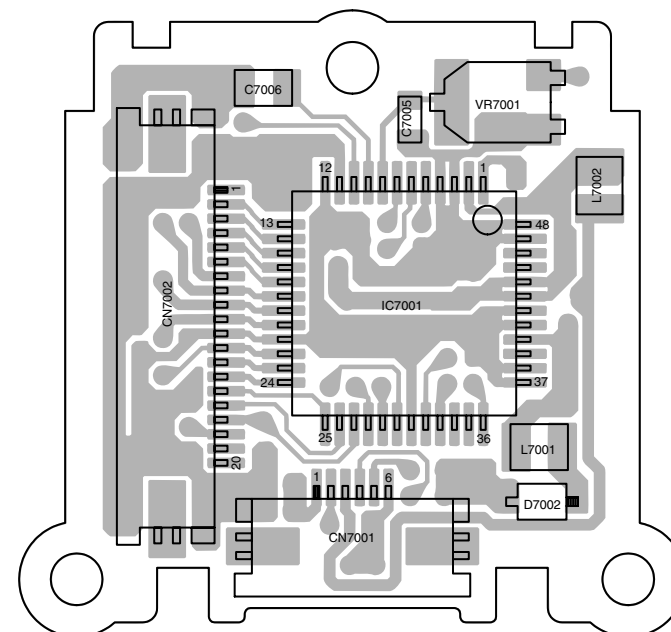
FOIL SIDE (B)

08 VF PWB
YB20910



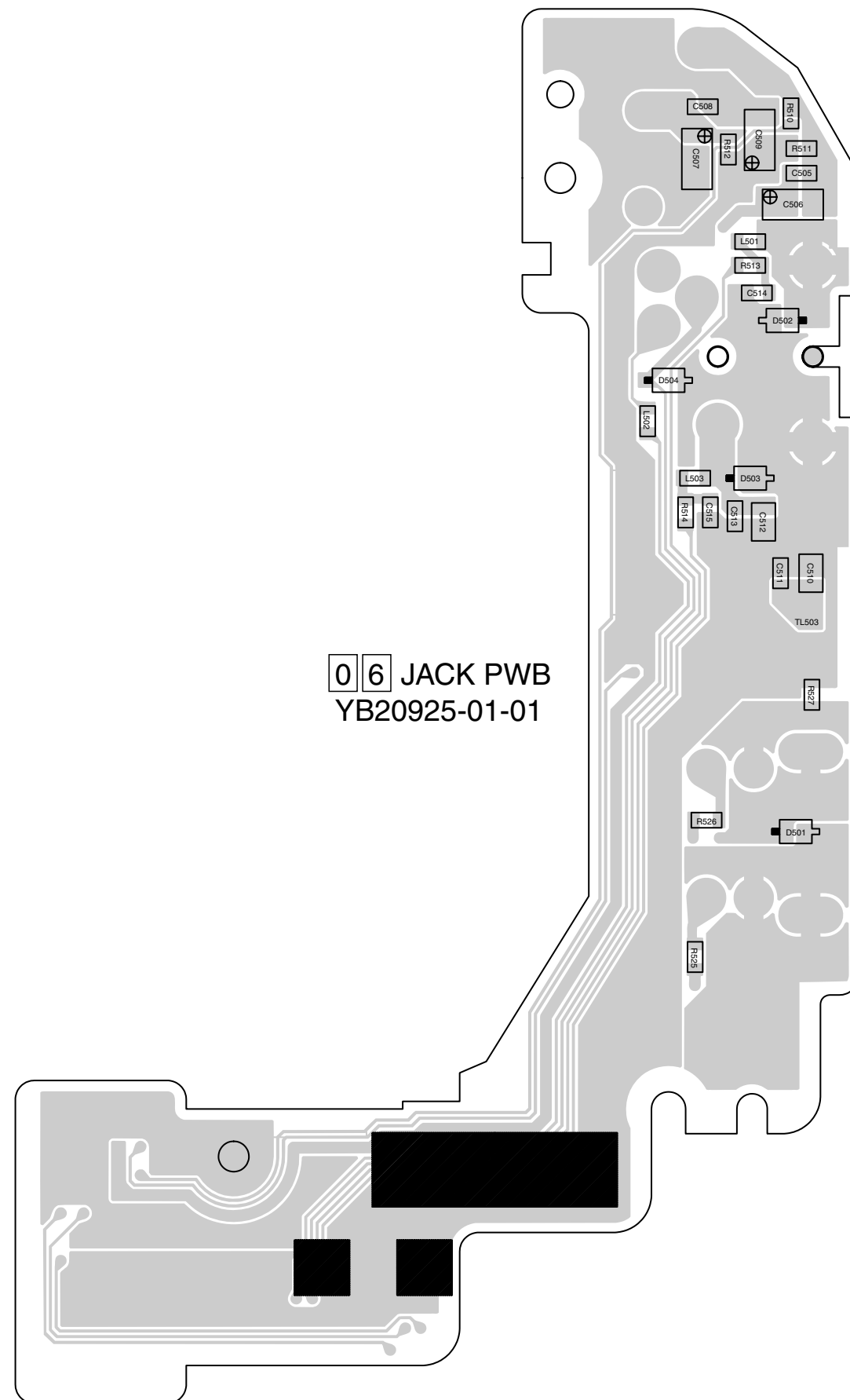
COMPONENT SIDE (A)

08 VF PWB
YB20910

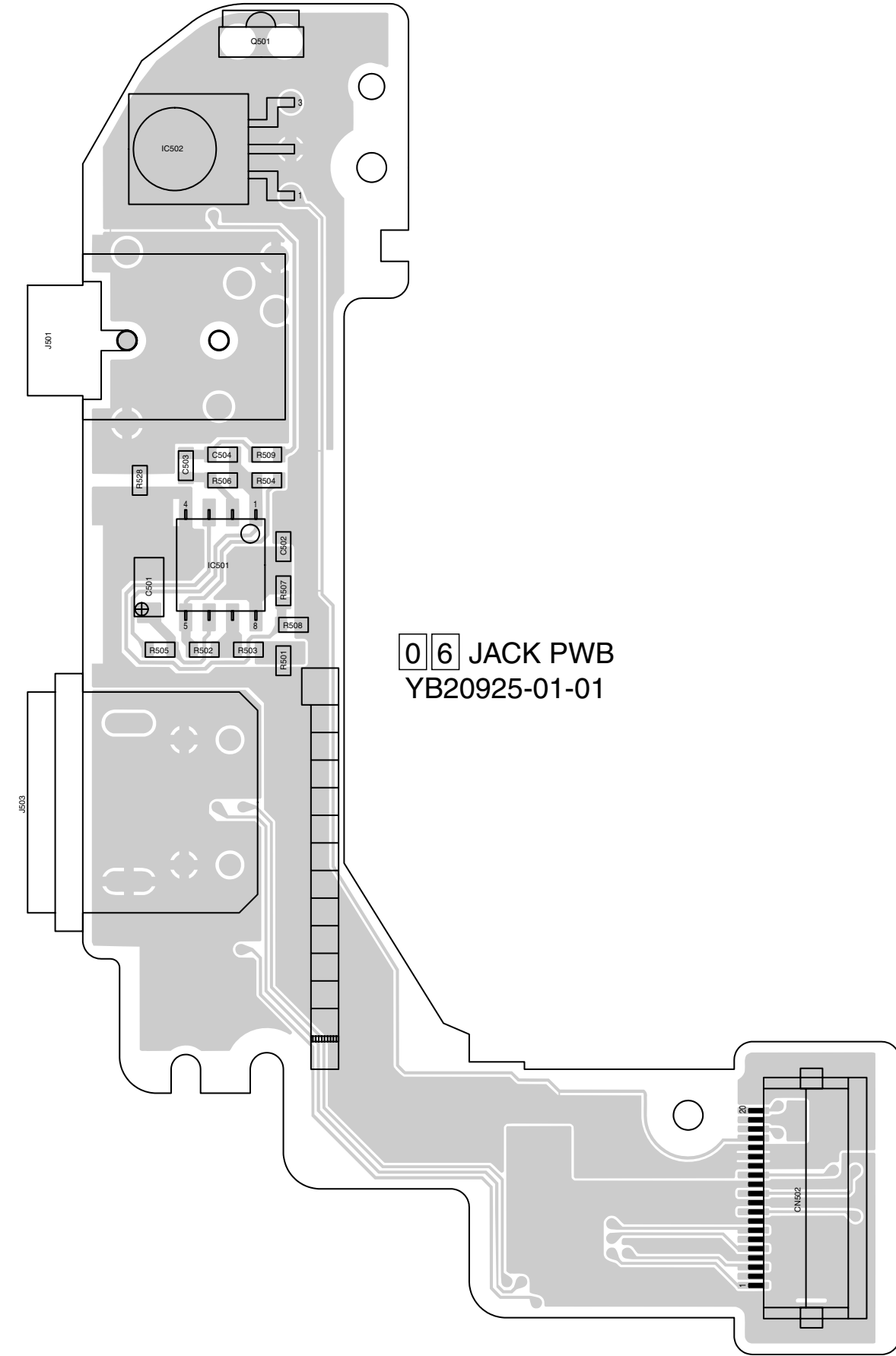


4.25 JACK CIRCUIT BOARD

FOIL SIDE (B)



COMPONENT SIDE (A)



4.26 VOLTAGE CHARTS

<SYSCON>

MODE PIN NO.	REC	PLAY
IC1001	-	-
IC1002	-	-
IC1003		
1	3.0	3.0
2	0.7	0.7
3	3.1	3.1
4	0	0
5	0.6	0.6
6	3.0	3.0
7	3.0	3.0
8	3.1	3.1
IC1004		
1	1.4	1.4
2	0	0
3	1.3	1.3
4	0	0
5	3.0	3.0
IC1005		
1	0	0
2	3.0	3.0
3	0	0
4	3.0	3.0
5	3.0	3.0
IC1006		
1	2.7	2.7
2	0	0
3	0.4	0.4
4	3.0	3.1
5	3.1	3.1
6	3.1	3.1
7	1.4	1.4
8	1.4	1.4
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	3.0	3.0
20	2.9	2.8
IC1007	-	-
IC1009	-	-
Q1001		
E	0	0
C	0	0
B	0	0
Q1002		
E	0	0
C	3.1	3.1
B	0.6	0.6
Q1004	-	-
Q1005		
D	3.0	3.0
S	0	0
G	3.0	3.0
Q1010	-	-
Q1011	-	-
Q1012	-	-
Q1013	-	-

<D.CPU>

MODE PIN NO.	REC	PLAY
IC1401	-	-
Q1401		
E	3.1	3.1
C	3.1	3.1
B	3.1	3.1
Q1402		
1(E)	0	0
2(B)	3.1	3.1
3(E)	3.1	3.1
4(C)	2.8	2.8
5(C)	0	0
Q1403		
1(E)	0	0
2(B)	0	0
3(E)	3.0	3.0
4(C)	0	0
5(C)	3.1	3.1

<MDA>

MODE PIN NO.	REC	PLAY
IC1601		
1	0	0
2	0.8	0.8
3	0.8	0.8
4	0.8	0.8
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	4.8	4.8
13	0.4	0.4
14	0.4	0.4
15	0.4	0.5
16	0	0.6
17	0.7	0.8
18	11.1	11.1
19	1.5	1.5
20	1.5	1.5
21	1.5	1.5
22	1.5	1.5
23	1.5	1.5
24	1.5	1.5
25	1.5	1.5
26	1.6	1.5
27	1.5	1.5
28	1.5	1.5
29	3.1	3.1
30	0	0
31	0.7	0.7
32	0.6	0.6
33	1.6	1.6
34	3.1	3.1
35	0	0
36	0	0
37	0	0
38	0	0
39	0	0
40	1.7	1.7
41	0.7	0.7
42	0.7	0.7
43	0	1.0
44	0.6	0.7
45	0	0
46	0	0
47	2.8	2.8
48	1.2	1.2
49	1.6	1.5
50	1.5	1.5
51	1.5	1.5

MODE PIN NO.	REC	PLAY
52	1.5	1.5
53	1.6	1.5
54	0.4	0.4
55	0	0
56	0.8	0.8
57	0.8	0.8
58	0.8	0.8
59	0.8	0.8
60	1.2	1.1
61	0.4	0.4
62	0	0
63	11.1	11.1
64	1.7	1.7
IC1602		
1	-	-
2	3.1	3.1
3	-	-
4	0	0
5	-	-
6	0	0
7	-	-
8	3.1	3.1
Q1601		
1(E)	0	0
2(B)	0	0
3(E)	4.8	4.8
4(C)	0	0
5(C)	4.8	4.8

<AUDIO>

MODE PIN NO.	REC	PLAY
IC2001		
1	2.1	0.7
2	2.0	0
3	2.0	0
4	2.1	0
5	1.5	1.5
6	1.5	1.5
7	1.5	1.5
8	0	0
9	3.1	3.1
10	0.7	1.5
11	0.7	1.5
12	0.7	1.5
13	0.7	1.5
14	1.5	1.5
15	1.5	1.5
16	0.6	1.5
17	1.4	1.5
18	1.5	1.5
19	1.3	1.5
20	1.5	1.5
21	1.3	1.3
22	2.4	2.4
23	4.8	4.8
24	0	0
25	0	0
26	0	0
27	3.1	3.1
28	0	0
29	1.5	0
30	1.3	1.3
31	1.5	0
32	2.9	2.9
33	3.0	3.0
34	1.5	1.5
35	1.5	1.6
36	1.5	1.4
37	3.0	3.0
38	0	2.4
39	0	0
40	0	2.4

MODE PIN NO.	REC	PLAY
41	0	0
42	0	0
43	4.8	4.8
44	1.5	1.5
45	2.0	0
46	2.0	0
47	2.1	0
48	2.0	0.6
49	2.1	0.5
50	2.1	0.5
51	2.1	0
52	2.7	0
53	2.0	0
54	2.0	0
55	4.1	4.2
56	2.0	2.1
57	0	0
58	4.1	4.2
59	2.0	0
60	2.0	0
61	2.0	0
62	2.0	0
63	2.0	1.0
64	2.0	0
Q2001		
1(E)	0	0
2(E)	0	0
3(B)	0	0
4(C)	0	0
5(B)	0	0
6(C)	0	0
Q2002		
E	4.1	4.2
C	4.8	4.8
B	4.8	4.8
Q2004	-	-

<DVMAIN>

MODE PIN NO.	REC	PLAY
IC3001	-	-
IC3005		
1	0	0.4
2	0	0.4
3	0	0
4	2.1	2.1
5	1.1	1.2
6	1.2	1.6
7	3.1	3.1
8	1.2	1.6
Q3001	-	-
Q3002	-	-

<PRE/REC>

MODE PIN NO.	REC	PLAY
IC3501		
1	0	0
2	0.5	0.5
3	0	0
4	0	1.6
5	2.5	2.5
6	2.3	1.6
7	1.4	0
8	0	0
9	1.4	3.1
10	1.9	1.9
11	3.1	3.1
12	0	0
13	4.8	4.8
14	0	0
15	0	0

MODE PIN NO.	REC	PLAY
16	0	0
17	0	0
18	3.6	1.7
19	3.3	1.7
20	3.3	1.7
21	3.6	1.7
22	0	0
23	3.6	1.7
24	3.3	1.7
25	3.4	1.7
26	3.6	1.7
27	0	0
28	1.9	2.3
29	3.3	1.7
30	3.3	1.7
31	2.2	2.7
32	0	0
33	0	0
34	0	0
35	1.8	1.8
36	0.4	0.4
37	3.1	3.1
38	0	3.1
39	3.1	3.1
40	1.5	1.5
41	0	3.1
42	3.1	0
43	4.8	4.8
44	3.0	0
45	0.6	0
46	0	2.0
47	0	2.1
48	4.4	3.1
49	4.6	2.8
50	0	1.6
51	1.2	1.2
52	1.1	1.7
53	0	0
54	3.1	2.6
55	2.4	1.9
56	1.1	1.1
57	2.5	1.9
58	2.5	1.3
59	0	0
60	1.2	1.2
61	3.6	1.9
62	2.4	1.9
63	2.5	1.3
64	2.5	1.9
IC3502		
1	0.5	0
2	0.5	0
3	0	0
4	0.7	0
5	3.1	3.1

<V OUT>

MODE PIN NO.	REC	PLAY
IC3701		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	2.3	2.3
10	0	0
11	2.1	2.1
12	2.1	2.1
13	4.8	4.8

<MONI IF>

MODE PIN NO.	REC	PLAY
IC4305	-	-
Q4304	-	-
Q4305	-	-
Q4306	-	-
Q4307	-	-
Q3701	-	-
Q3702		
1(E)	0	0
2(B)	0	0
3(C)	0	0
4(E)	4.8	4.8
5(B)	4.4	4.4
6(C)	4.4	4.4

<OP.DRV>

MODE PIN NO.	REC	PLAY
IC4601	-	-
IC4602	-	-
IC4901	-	-
Q4601	-	-
Q4602	-	-
Q4901	-	-

<DSP>

MODE PIN NO.	REC	PLAY
IC4201		
1	0	0
2	1.3	0
3	1.8	3.0
4	1.8	3.0
5	1.5	3.1
6	1.3	3.1
7	0	0
8	0.4	0
9	0.6	0
10	0.4	0
11	0	0
12	0	0
13	3.1	3.0
14	0	0
15	0	0
16	1.2	1.2
17	3.0	3.1
18	3.1	3.1
19	2.5	2.5
20	3.0	3.0
21	2.2	2.2
22	2.2	2.2
23	0	0
24	3.0	3.0
25	0	0
26	0	0
27	3.0	3.0
28	2.0	0.4
29	2.0	0.4
30	2.0	1.7
31	2.0	0.5
32	1.3	0
33	3.0	3.1
34	0	0
35	0	0
36	0	0
37	1.5	0.4
38	2.0	0.4
39	0.9	0.5
40	3.0	3.0
41	0	0
42	0	0
43	3.0	3.0
44	3.0	3.0
45	0	0
46	3.0	3.0
47	1.5	0
48	3.0	3.0
IC4202		
1	4.8	4.8
2	0	0
3	1.2	1.2
4	3.0	3.0
5	4.8	4.8
IC4301	-	-
IC4302	-	-

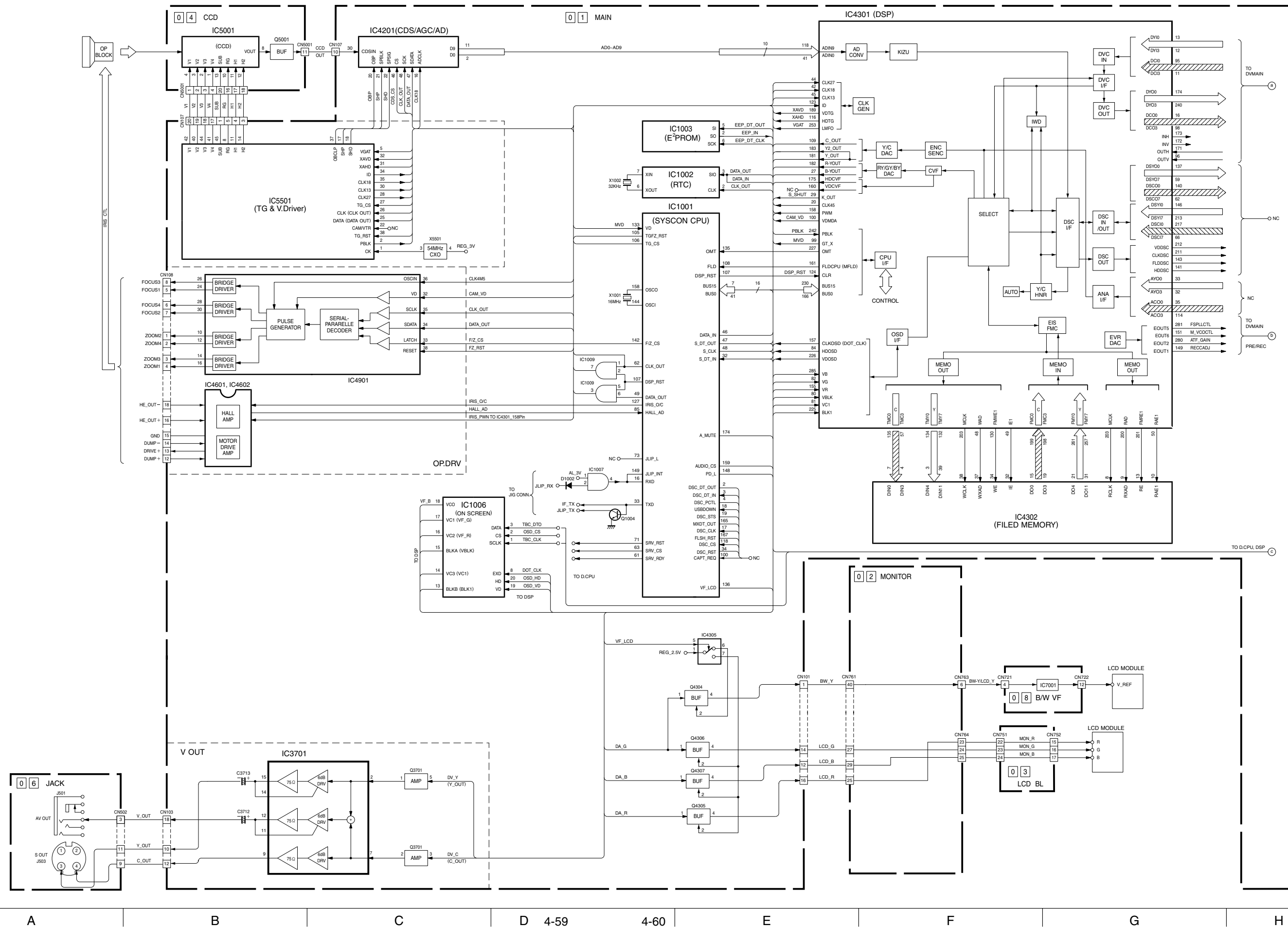
<TG>

MODE PIN NO.	REC	PLAY
IC5501	-	-

<REG>

MODE PIN NO.	REC	PLAY
IC6001	-	-
IC6101	-	-
Q6001		
E	0	0
C	-	-
B	3.1	3.1
Q6002	-	-
Q6004	-	-
Q6201		
D	11.1	11.1
S	7.8	7.8
G	3.1	3.1
Q6202		
E	3.1	3.1
C	2.5	2.5
B	2.4	2.4
Q6203		
D	11.1	11.1
S	9.1	9.1
G	1.8	1.8
Q6204		
D	11.1	11.0
S	6.1	6.0
G	4.9	4.9
Q6205		
E	4.8	4.8
C	0	0
B	4.8	4.8
Q6206		
E	0	0
C	4.8	4.8
B	0	0
Q6208		
D	11.1	11.1
S	-	-

4.28 VIDEO SYSTEM BLOCK DIAGRAM



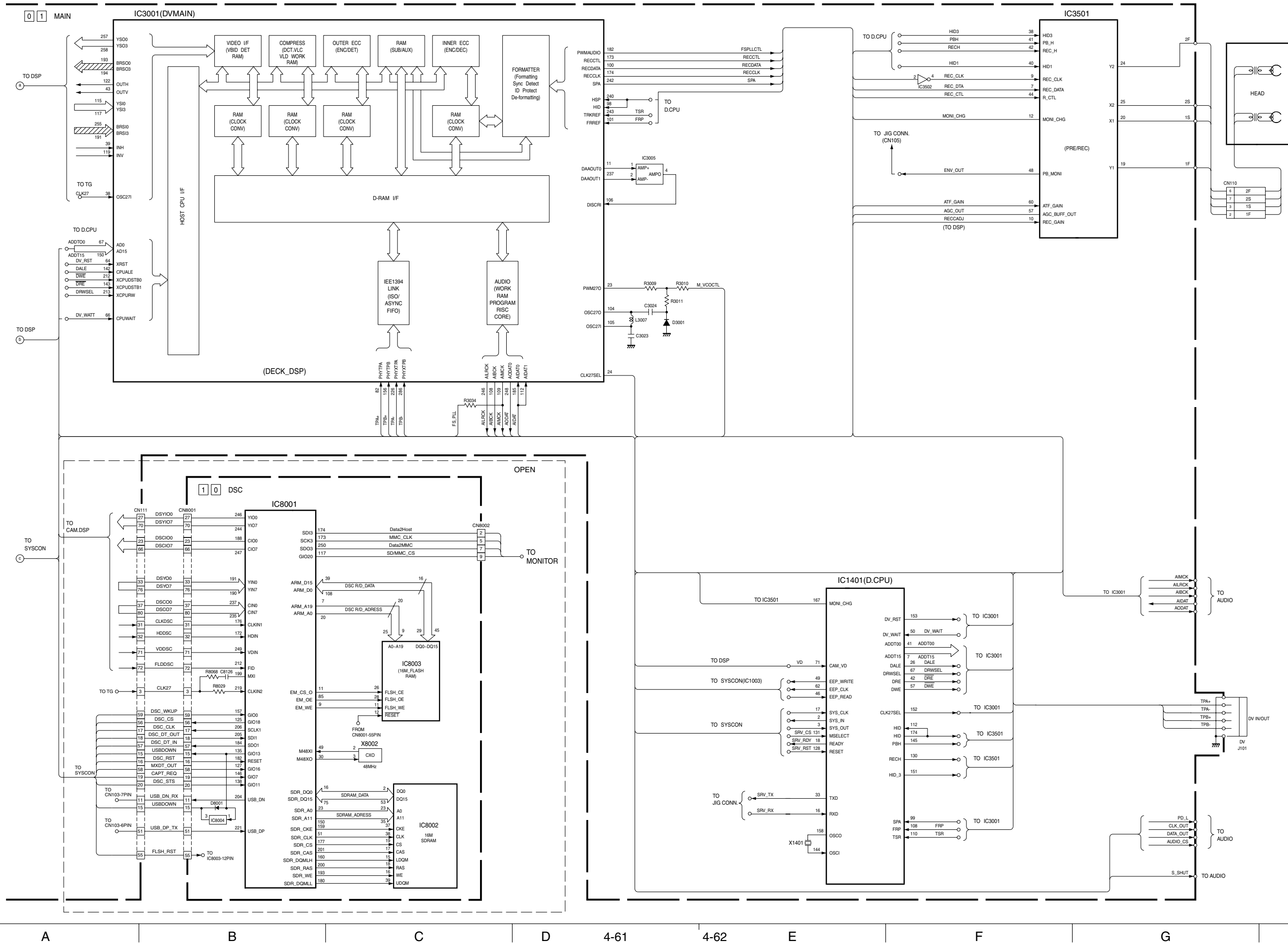
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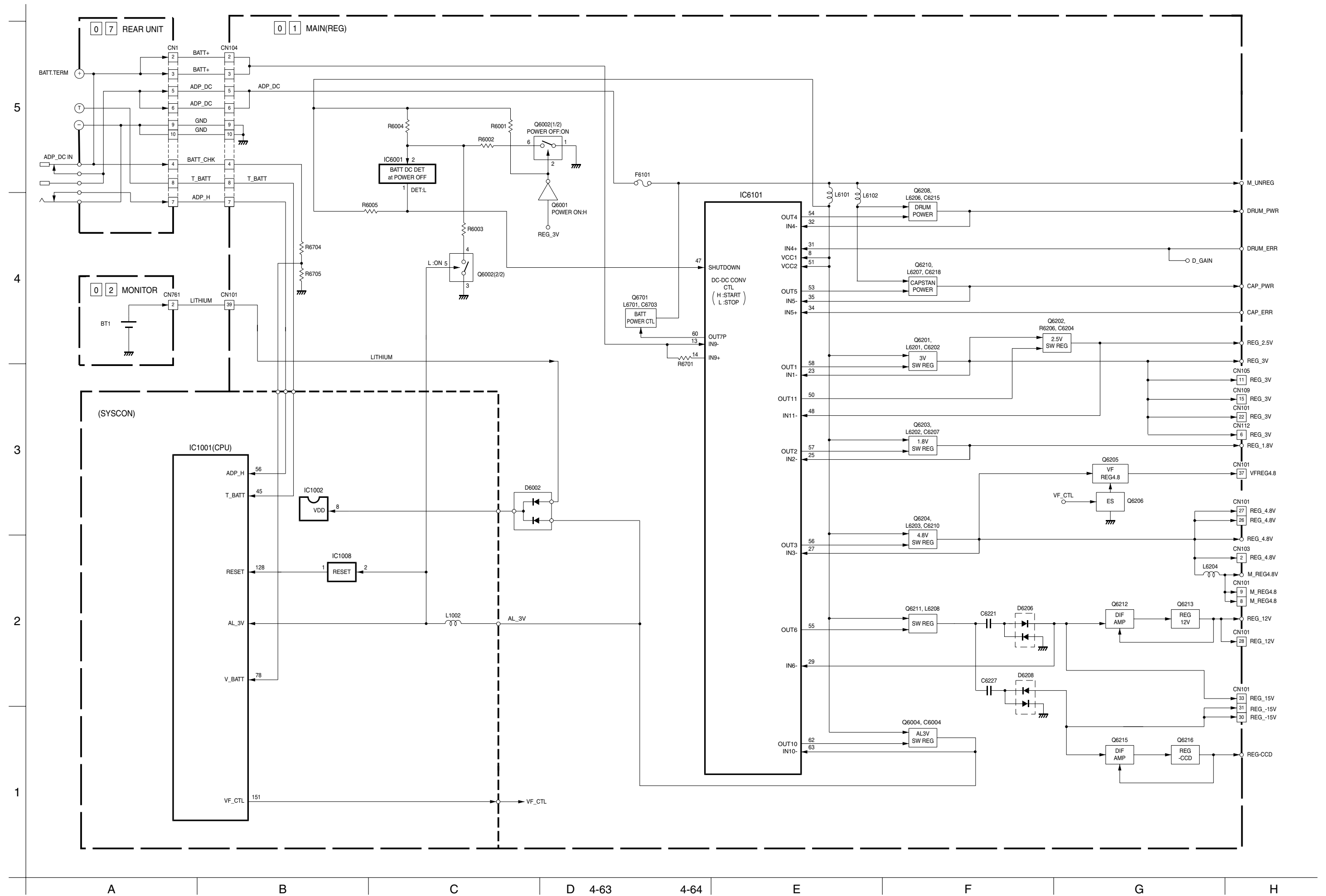
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4.29 REGULATOR SYSTEM BLOCK DIAGRAM





VICTOR COMPANY OF JAPAN, LIMITED
VIDEO DIVISION

S40894